Drug & Cosmetic

INDUSTRY

February 19[illegible]

With malice toward none;
with charity for all.

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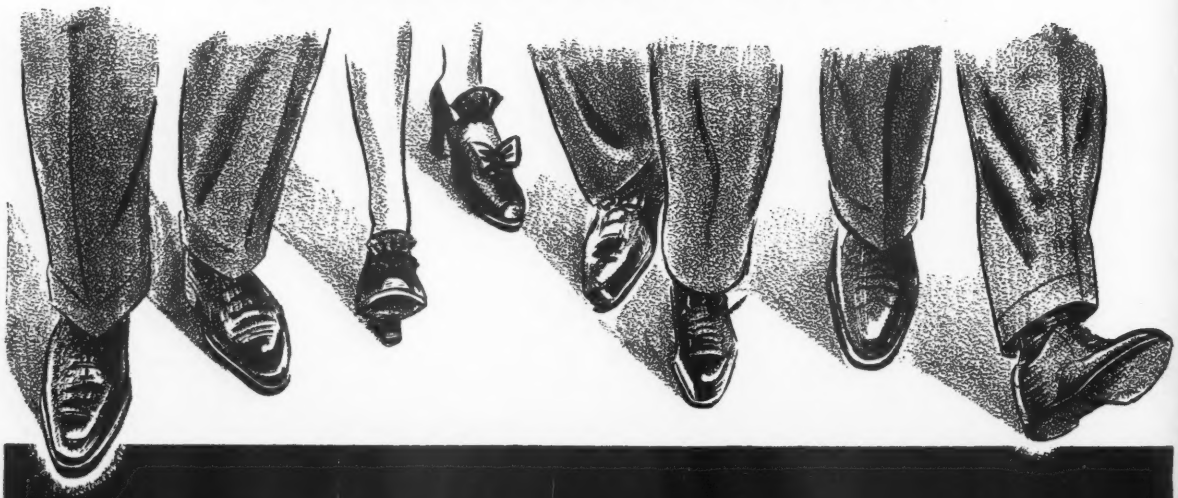
Foot Loose! with SNOWTOP PRECIPITATED CHALK



SNOW TOP

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DIVISION WEST VIRGINIA PULP & PAPER COMPANY

230 PARK AVENUE, NEW YORK CITY
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This advertisement appears in full-color in the Feb. 22nd TIME, Feb. 27th BUSINESS WEEK, Feb. MODERN PACKAGING, March 1 SALES MANAGEMENT, March 1 TIDE, as a part of our continuing program to not only tell the story of Duraglas but also to help tell the story of Vitamin products to all America.

Packages for Rosy Cheeks—

and Sparkling Eyes

A vitamin package holds more than tablets, capsules or liquid.

It holds normal growth and strong bodies for vitamin-deficient children . . . better health for adults.

To package such precious things, vitamin makers choose trustworthy *Duraglas containers. For a Duraglas package protects its contents, can be resealed against air* and moisture.

To other products, too, the Duraglas technique brings the advantages of strong, lightweight, economical glass containers — *a packaging improvement here today . . . for* tomorrow as well. Owens-Illinois Glass Company, Toledo.

OWENS-ILLINOIS GLASS

Developers of Duraglas — The Improved Technique in Glassmaking

Drug & Cosmetic INDUSTRY

FEBRUARY 1943

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Front Cover

Once again our cover is a reproduction of a photograph taken by John J. Loughlin, an employee of the Chemists' Club, New York, who makes photography his hobby

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Gracious and exquisite at tonight's dinner table, keen and eager on the production line tomorrow! Nowadays, American women by the million must give their complexion special care. So, cosmetics have an extra job to do—keeping complexions lovely is more difficult than ever before.

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MM&R "So Sorry" to Disturb Mosquito Emancipator!

As if our enemies aren't plentiful enough, Mr. Tojo slows down Oil Citronella importations to a trickle and all but emancipates another enemy horde, the vicious CULEX *(common American mosquito)* just by way of giving us *an extra "buzzy" time* on the home front swatting down this particularly persistent aerial antagonist.

To nip the Nippon's newest nuisance in the nick of time, M M & R comes to the rescue of Oil Citronella users with OIL CITRONELLA REPLACEMENT #21 M M & R, *a thoroughly tested, highly efficient product* that approximates the odor characteristics of Citronella to a remarkable degree and yet *costs less than one third of the natural product.*

If you have been using Ceylon or Java Citronellas or an equally hard to obtain camphoraceous oil, *write today* for a testing sample and our *attractive* price schedule on OIL CITRONELLA REPLACEMENT #21 M M & R.

M M & R *"so happy"* to serve American Industry and people . . . *"so sorry"* to disturb Mr. Tojo and friends.

OTHER GOOD NEWS ON THE REPLACEMENT FRONT

These are a few of the many other M M & R replacements for currently high priced and hard to get oils.

ANNOL M M & R—Replaces Oil Anise in technical products of many kinds.

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OIL LEMONGRASS REPLACEMENT #619 M M & R—Replaces Oil Lemongrass Native. Ideal where low priced perfume oil is needed.

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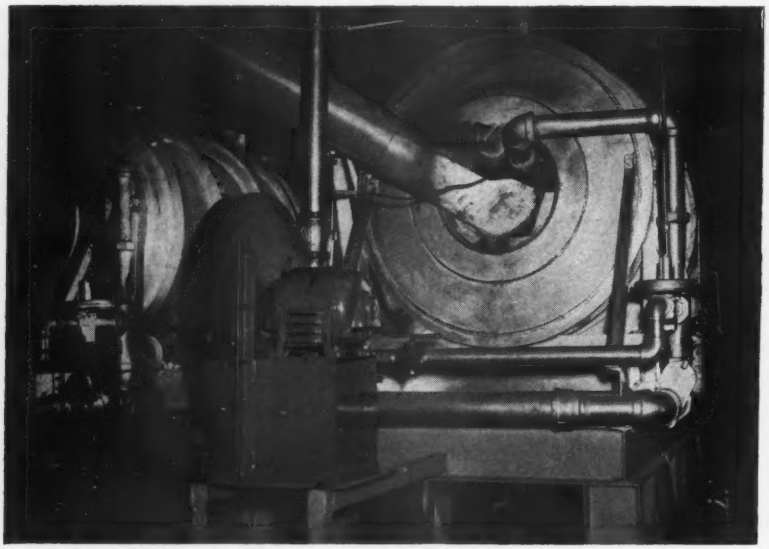
INSIDE NEWS

FEBRUARY PREPARED BY NATIONAL CAN CORPORATION, NEW YORK, N. Y. 1943

Vegetable Flame Peeler Proves Successful



FLAME PEELER IN USE—*More satisfactory than abrasive peelers which remove a much higher percentage of the good part of vegetables, the flame peeler may well become a standard piece of cannery equipment in normal times.*

A FLAME PEELER has been used by a New York canning company to prepare vegetables for newly installed dehydrating lines. So successful has been the operation that it may prove a satisfactory unit for use in canning operations as well as for dehydrating.

The peelers originally were designed for use on pimentos in the south. They have been tried experimentally on carrots and should prove satisfactory for similar root crops.

The peeler consists of a large rotating metal cylinder lined with a refractory brick worm which carries the product through the cylinder during the flame treatment. An intense flame is blown into the cylinder through the intake end. As the vegetable passes through the outer surface is charred. A forceful stream of water at the output end of the machine washes off all the charred peel and the vegetable is ready for the inspection and preparation line.

The advantages of the flame peeler are said to be fast production with a minimum waste of material, since there is no abrasion beyond that of the water spray which cannot penetrate deeper than the heat treatment. (269)

Brazilian Oils Gain New Importance

Besides producing cottonseed, linseed, castor, coconut, brazil-nut, sunflower, peanut and palm kernel oils, as well as oil from coffee, Brazil yields many other vegetable oils which may become important as a result of war shortages. They include citicia oil from the seed of that name; babacu oil from babacu nut; andiroba oil, similar to almond oil; curicuri oil, similar to copra oil; bankul oil from the nogueira nut; cumarin oil; the edible oils of curua, sesame and macauba; pracaxi oil; corn oil and mustard oil. Moreover, murumuru and tacum, two vegetable fats used in the manufacture of margarine, are also produced in Brazil. (270)

* * * * *

SYNTHETIC TALL OIL has reportedly been produced in India from rosin and fatty acids by a method worked out at the Forest Research Institute, Dehra Dun. This material is in demand for the production of asphalt emulsions for road making. the British press reports.

Paints Now Made With Synthetic Resins

Paints made with synthetic alkyd resins have durability and adaptability. In the new lusterless, olive-drab enamels, these resins have largely replaced tung and perilla, and their incorporation in other paints has produced coatings particularly valuable for protecting the superstructure and other parts of warships. One report asserts that these resins and heat-bodied linseed oil yield varnishes better in some cases than those produced with tung—and at a smaller cost. (271)

New Substitute for Sponge Rubber

Because a kettle boiled over accidentally, a surgical dressings manufacturer has announced, there is a new substitute for sponge rubber that can be produced from waste farm products and used in tanks, airplanes and other war equipment.

Two chemists in the laboratories of the company were seeking a substitute for rubber as an adhesive in adhesive tape. They combined a resin with an acid. When they attempted to vulcanize it in a kettle with other chemicals, the contents foamed up out of control. They succeeded in controlling the foam and the new rubber substitute was the result. The sponge-rubber substitute, as yet unnamed, can be used to line tanks, pad airplane cockpits, pad helmets, fill seat cushions and make de-icers for airplane wings and mattresses for hospitals.

After the war the product will be used for general civilian production to replace natural sponge rubber. The discoverers of the new product said the resin was derived from soybean and corn oil. They said that by controlling the foam they can control the density and resilience of the substitute rubber. It is also claimed that the product absorbs more water than spongy rubber and can be easily vulcanized to metals, plastics or wood. Moreover, it does not age as rapidly as natural rubber and resists acids and gasoline better. (272)

War Spurs Meat-Drying Techniques

Probably one of the most important developments to come out of the war, so far as the other Americas are concerned, is the advance in knowledge of drying meats. The U. S. Government is placing large orders for millions of pounds of dried beef and pork.

Dried beef is made from the lean portions of beef cattle, with bones and fat removed. An average steer will produce about 75 pounds of dried beef weighing only one fourth as much as the original meat and measuring only one half the volume. Equally important, the dried beef can be safely eaten months after it has been prepared. (273)

NATIONAL CAN

PLANTS: NEW YORK • BOSTON • BALTIMORE • CHICAGO • HAMILTON, OHIO • FORT WAYNE, INDIANA

Importation of Mexican beer into the United States has more than tripled since last year. The leading breweries declare that they can supply only half of the present U. S. demand. Mexican beer also goes to several Latin-American countries.

* * * * *

Promote Sauerkraut Canning in the Home

Owing to restrictions placed upon canning sauerkraut in tin cans, manufacturers of kraut may stimulate the sales of bulk kraut by promoting its purchase for home canning in addition to that used for immediate consumption.

The objection to enforced selling of kraut in bulk is that it does not keep the year around. Continued fermentation in the containers after it is in the retailer's establishment eventually makes the kraut unedible. It is unlikely, therefore, that bulk consumption can ever result in as large a total demand as existed when the product could be canned.

However, a real consumer education campaign, sponsored by the kraut packers, might well point out to the housewife the advantages of purchasing new kraut in bulk and packing it at home for future consumption. Such promotion could give specific directions for home-canning of kraut, either by the hot-pack or cold-pack method.

Home-canning of kraut is easy. The only disagreeable home chore would be making the kraut in the first place. (274)

WARTIME CONTAINERS—National Can Corporation is producing quantities of steel drums and kits to contain essential war supplies. The type of steel drum shown here carries high-grade lubricating oil and solvents for the U. S. armed forces, has a capacity of 5 imperial gallons.

Technical Topics

VEGETABLE "BRICKS"—The compression of dehydrated vegetables into "bricks" which can be coated with various packaging materials to replace critical metals is being studied by the New York State Agricultural Experiment Station at Geneva, N. Y. The dried vegetables are reduced under tremendous pressure to small "bricks" practically free from air. They are then coated with various moisture-proof and gas-proof materials. (275)

NETTLES—Britain's search for economic value in weeds has developed a paper of excellent quality from nettles. (276)

PHOSPHATE COMPOUNDS occupy an important role in the manufacture of bread for the American armed forces. Ammonium phosphate is used as a propagating agent for yeast going into the dough, and sodium ferric pyrophosphate is added to the dough batch to aid the nutritive qualities of the flour. (277)

GELATINE can be made from dried rabbit skin shreds, and a patent covering the method has recently been issued. (278)

FLAVORINGS—Allied occupation of Reunion Island in the North African campaign gives this country another source of flavoring ingredients. Vanilla beans are produced on that island—also vetiver, ylang ylang and geranium. (279)

CHLORINE added in very small amounts to the circulating water of steam condensers was successful in preventing organic growths in the tubes. It is reported that the treatment is now in use in many British power stations. (280)

HALOGENATED POLYTHENES, described in a recent British patent, are declared to be useful raw materials for the manufacture of paints, varnishes, artificial leathers and related products. The polythene to be halogenated is made by polymerizing ethylene by subjecting it to very high pressure and moderately high temperature. (281)

AMMONIA SUBSTITUTES — Replacements for household ammonia, now unavailable because of the war, have been introduced by a number of manufacturers. The new products are said to clean everything that ammonia will clean, while offering the additional advantages of improved odor and lower toxicity. (282)

INSECTICIDE—A possible substitute for rotenone, essential insecticide ingredient now practically unavailable, exists in the ground seeds of the yam bean, a tuber-like root grown in some Central and South American countries. Tests against cabbage worms, codling moth larvae, aphis, etc. showed results in some cases equal to the control provided by rotenone. (283)

TERPHENYLS have been made available commercially by a large American chemical manufacturer. The new high molecular weight, aromatic compounds are declared to offer opportunities in the chemical synthesis of dyes, drugs, and organic chemicals. They may be halogenated, sulphonated, or nitrated in the manner usual for aromatic compounds, it is added. Ortho, meta, and para forms are offered. (284)

PLANT HORMONES—Phenoxy and benzoic acids substituted in the nucleus with halogen, methyl, and nitro groups were declared recently to have opened a new line of progress in plant hormone development. Dichlorophenoxyacetic acid is very effective, it was stated, in causing cell elongation, adventitious roots, parthenocarpy and various formative effects. (285)

CHLOROPHYLL has been shown in recent investigations to have medicinal value in combating deep-lying infections in the cleansing of wounds, and in the relief of chronic sinus conditions and common head colds. It is also stated to be effective in controlling the offensive odor from certain anaerobic infections. (286)

ACRYLIC RESIN and mixed lower alipathic acid esters, such as cellulose acetate-butyrate or cellulose acetate-propionate, are stated to produce tasteless and odorless compositions suitable for coating the inside of metal food containers, according to a recent United States patent. (287)

Every effort will be made to furnish additional information on these articles. Where such information is not obtainable, we will refer inquiries to the original source of the article. Write to National Can Corp., 110 E. 42nd Street, New York City. Please mention the number at end of article—also name of the magazine you saw it in.

(Advertisement)

THE MOON AND THE TIDES

★

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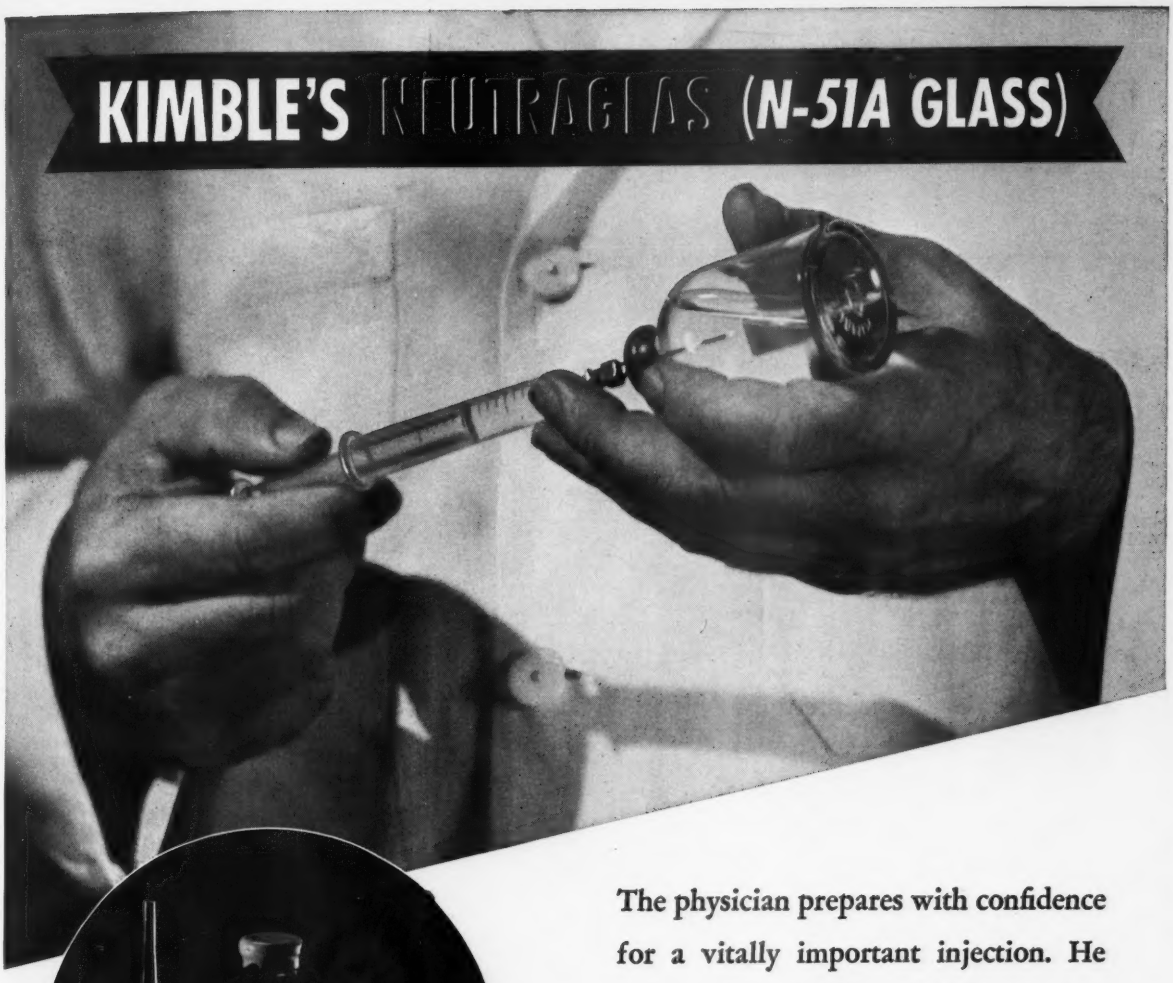

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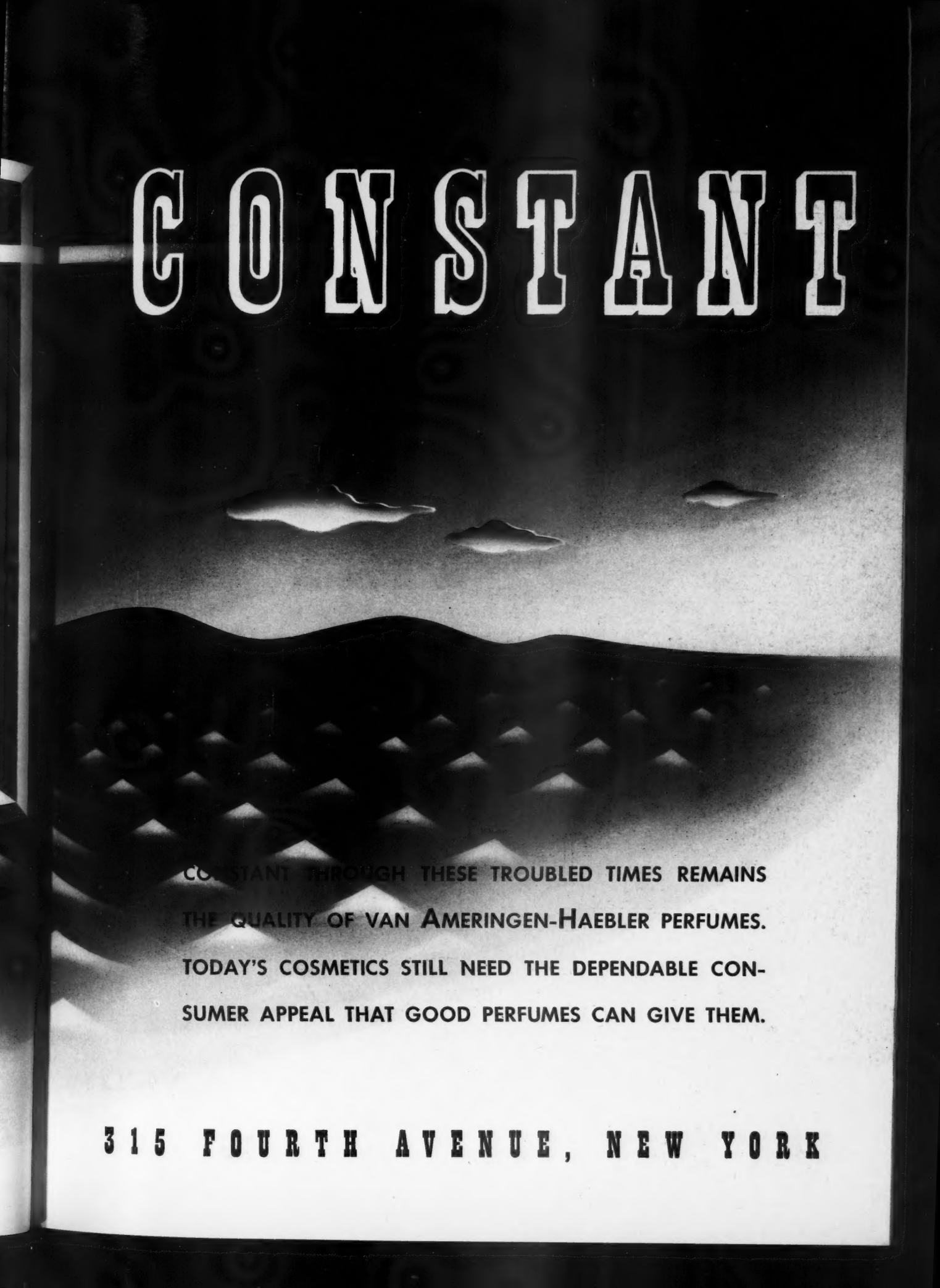
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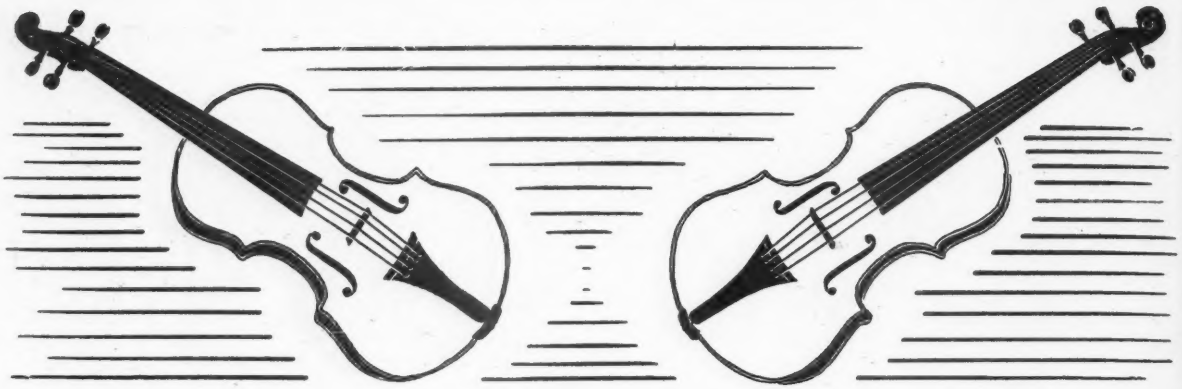

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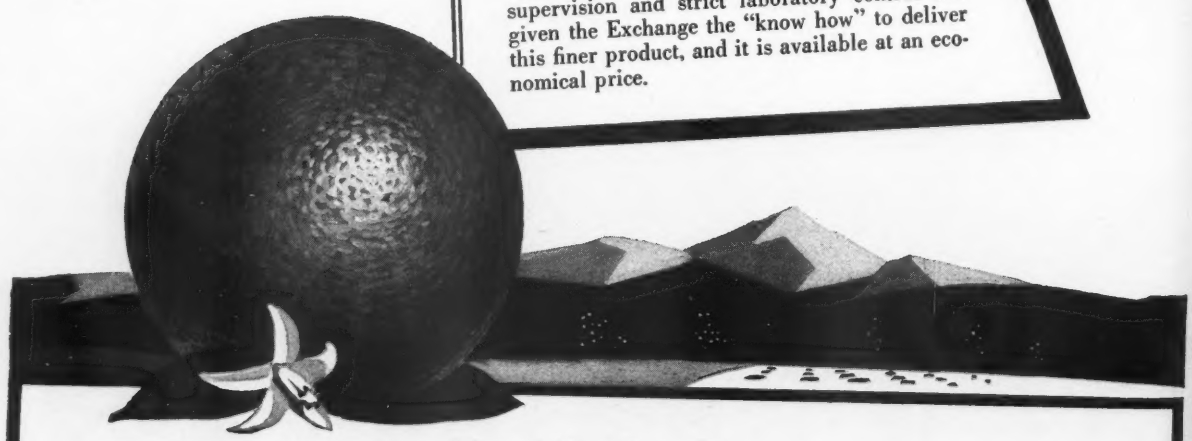

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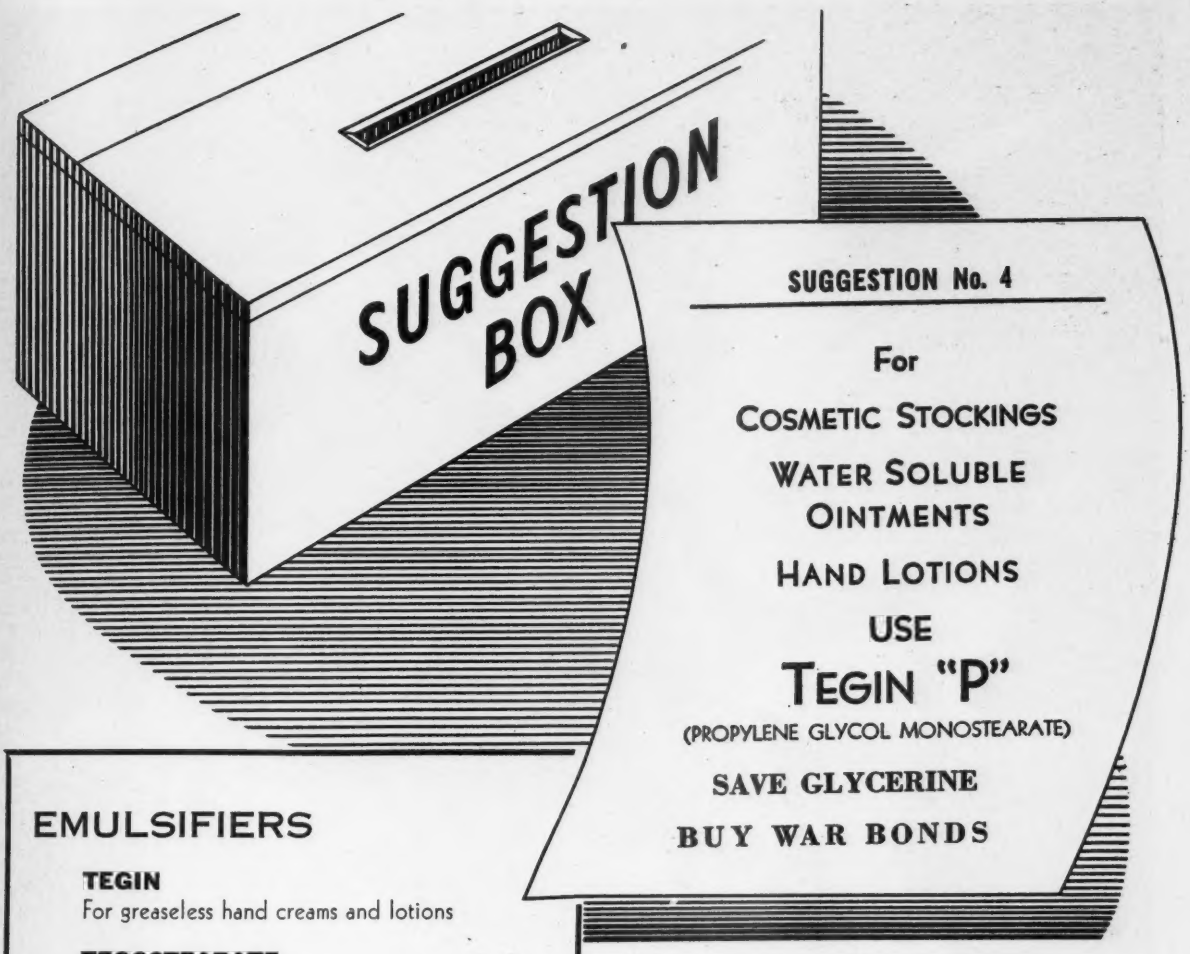

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TEGOSEPT M
For lotions

TEGOSEPT P
For creams

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CHEMICAL CORPORATION

153 Waverly Place New York, N. Y.

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The familiar Miracle

Look twice. You think you see a negative of two soldiers clashing in bayonet practice. Actually you are looking at sunlight and silver bromide.

The mysterious action of light on certain silver salts is just as much a miracle today as it was a hundred years ago when the first photographs were made.

Hardly less amazing is the remarkable sensitivity of present-day photographic emulsions.

These new films and papers could not be manufactured without exacting control of temperature, control of humidity and protection against dust. *Air conditioning* makes them possible.

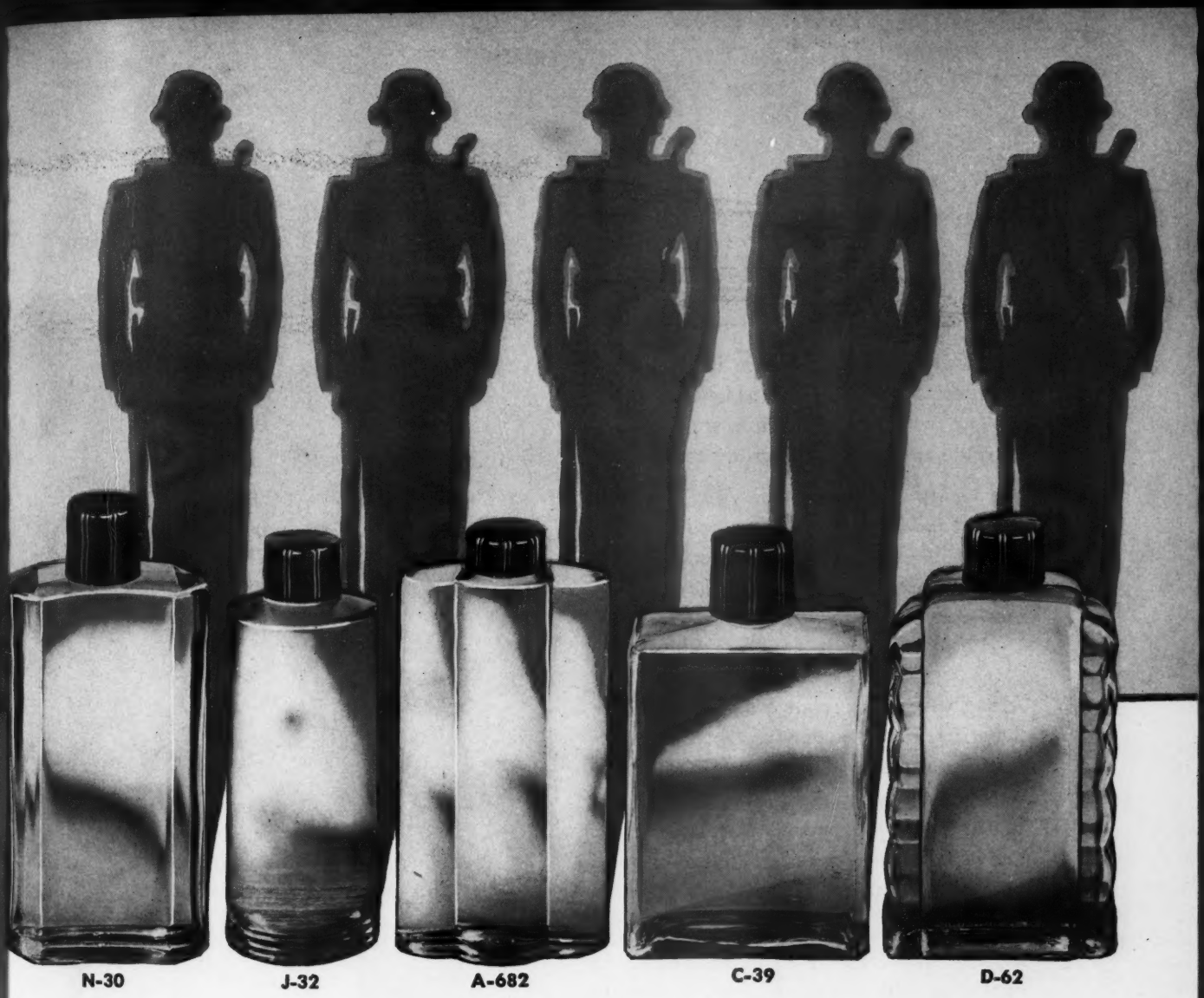
Air conditioning and refrigeration play a part in many photographic processes. They are being used to speed up military photography . . . improve all photography.

Today, air conditioning equipment . . . developed by General Electric . . . has been made more compact, more flexible to meet unusual wartime requirements.

After the war, these improvements will result in better air conditioning for offices, stores, theatres, hotels and many other civilian purposes. When the war is won, General Electric will provide this better air conditioning—for a better world.

Air Conditioning and Commercial Refrigeration Department, Division 432, General Electric Co., Bloomfield, New Jersey.

Air Conditioning by **GENERAL ELECTRIC**



N-30 J-32 A-682 C-39 D-62

ATTENTION!

Yes sir, these STOCK BOTTLES *certainly do have* ATTENTION VALUE

In times like these, it's a wonderful help for you to be able to draw upon Swindell's great assortment of smartly designed stock bottles. The five illustrated are "headliners"--but there are many more to choose from. Write for our catalogue.

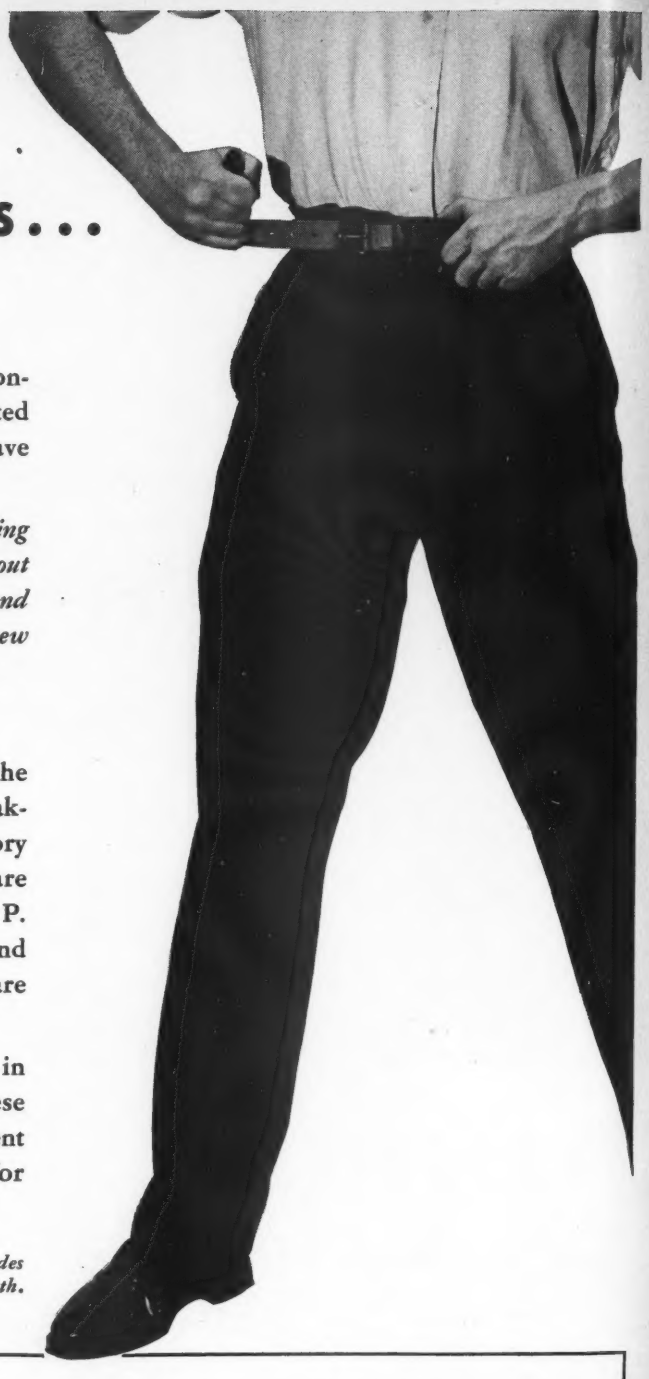
Illustrated above:
N-30: ⅛ oz. to 8 oz.
J-32: ½ oz. to 16 oz.
A-682: ⅛ oz. to 4 oz.
C-39: ½ oz. to 16 oz.
D-62: ½ dr. to 8 oz.

SWINDELL BROS.
BALTIMORE, MARYLAND
200 FIFTH AVENUE, NEW YORK
ROBERTO ORTIZ—HAVANA CUBA

When you think of bottles think of

Swindell

as we tighten our belts . . .



Cheerfully—eagerly, because it's our contribution to Victory, all of us have accepted the fact that for the duration, we will have to tighten our belts and "do without."

But typical American know-how is licking many of Industry's problems created by all-out war. We are discovering how available and familiar materials can be put to work on new uses—with results amazingly satisfactory.

* * *

Along with every refinery and plant in the American Petroleum Industry, we are making Government cooperation for Victory our first consideration. However, we are still able to supply quantities of our U. S. P. and Technical White Mineral Oils and U. S. P. Petrolatums. Some of them are listed below.

Equally important, we can be helpful in exploring with you the adaptation of these materials to the solution of your present problems and in assisting you to plan for peacetime production.

Attend the 18th Annual Drug, Chemical and Allied Trades Dinner at the Waldorf Astoria, on Thursday, March 4th.

WHITE MINERAL OILS

KAYDOL U. S. P. Heavy
ORZOL U. S. P. Heavy
PURITAN U. S. P. Heavy
ERVOL U. S. P. Light
BLANDOL U. S. P. Light
CARNATION
KLEAROL

PETROLATUMS U. S. P.

TYPE I: *Medium Consistency—White Protopet—Yellow Protopet and other colors*

TYPE II: *Soft Consistency — White Fonoline — Yellow Fonoline*

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SPECIALTIES

FYBRENE WAX—Amorphous (micro-crystalline) wax for pharmaceutical and cosmetic formulation.

SONO-JELL—Complete series for liquefying cleansing creams, pomades, ointments, etc.

DEO-BASE—Light hydrocarbon distillate refined to complete freedom from kerosene odor.

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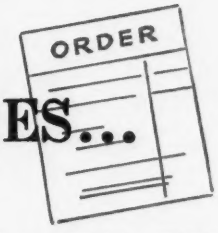
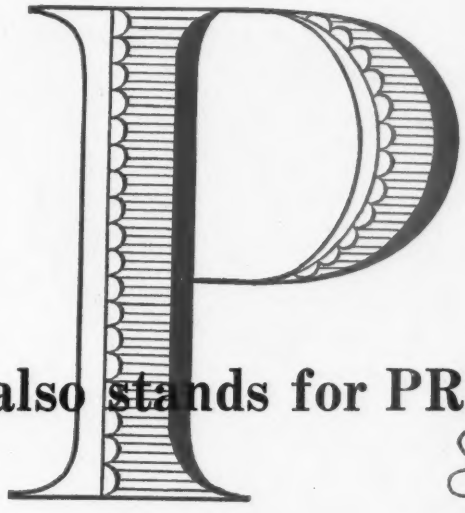
NEW YORK · CHICAGO · BALTIMORE · PHILADELPHIA · LOS ANGELES · Stocks Carried in Principal Cities

Southwestern Distributors: Sonneborn Bros., Dallas, Texas

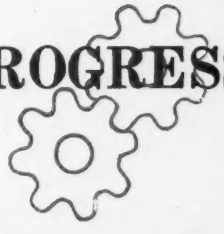
is for PRIORITIES...



the "quality or status of taking precedence," is Mr. Webster's way of saying "*first things first.*" However,



also stands for PROGRESS...



defined here at Cyanamid in terms of chemical advancement and contributions to users of chemicals in industry. Priorities, therefore, and all the necessary limitations these must continue to imply become a patriotic challenge to our resource, experience and ingenuity to help relieve critical shortages of essential chemicals.

As a result, new Cyanamid developments have been coordinated with rapidly expanding capacities for greater production for the war effort. Other timely developments are serving to keep the wheels of many civilian industries turning. Among the latter are new formulations that may not only meet your immediate production needs, but which are likely to have far-reaching advantages beyond the present emergency. Write to Cyanamid for details.

AMERICAN CYANAMID & CHEMICAL CORPORATION

A Unit of American Cyanamid Company · 30 ROCKEFELLER PLAZA, NEW YORK, N.Y.

MANUFACTURERS OF

Water Soluble Gums • Aerosol* Wetting Agents • Zinc Oxide • Zinc Stearate • Talc • Waxes—Ceresine Wax • Iso Beeswax • U.S.P. Beeswax • K & M Magnesium Oxide • K & M Magnesium Carbonate
Aquasol* and No-Odorol* • Sulphonated Oils

Reg. U. S. Pat. Off.

MUSKS

for your every requirement

AMBRETTE • KETONE • XYLOL

PAST PERFORMANCE—AN INDEX FOR THE FUTURE

Today, prices of synthetic Musks are considerably lower than during the last war!

And Givaudan has maintained stability in current price schedules—at very near their pre-war levels.

As pioneer domestic producers of these important perfume materials, Givaudan has long supplied Musks which have set the standards for purity and uniformity throughout the trade.

If you are in the market for Musks, we invite your inquiry.

GIVAUDAN-DELAWANNA, INC.

330 WEST 42ND STREET, NEW YORK, N. Y.

OUR PLANT FACILITIES ARE AVAILABLE FOR ANY FURTHER CONTRIBUTION WE MAY MAKE TO PRODUCTION OF MATERIALS FOR THE WAR EFFORT

REMEMBER THE 18TH ANNUAL DRUG, CHEMICAL AND ALLIED TRADES DINNER, WALDORF-ASTORIA HOTEL, THURSDAY, MARCH 4TH.

DRUG AND COSMETIC REVIEW

1942-43 EDITION

The Drug and Cosmetic Review, Sixth Edition, is the most complete and comprehensive reference book ever published for the use of those who buy raw materials, containers, machinery, and equipment for the production of drugs, cosmetics, perfumes, flavoring extracts, and allied products.

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1—The directory is in three separate, but consecutive sections for easy reference for: Packages, Equipment, Chemicals and Raw Materials.

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2—Thirty-nine separate articles on as many subjects, containing 116 pages of formulas and manufacturing processes. Over 800 selected formulas on lotions, bath salts, creams, face powders, depilatories, hair dressings, shampoos, deodorants, permanent wave solutions, tooth pastes, insect repellents, foot preparations, expectorants, ointments, etc.

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3—A complete section devoted exclusively to exceptional plant arrangements and layouts.

4—Association Section.

5—Statistical Section.

6—The most complete reference of sources of supply for this trade ever published. Full story, many in catalog form, on where to buy and who to buy from.

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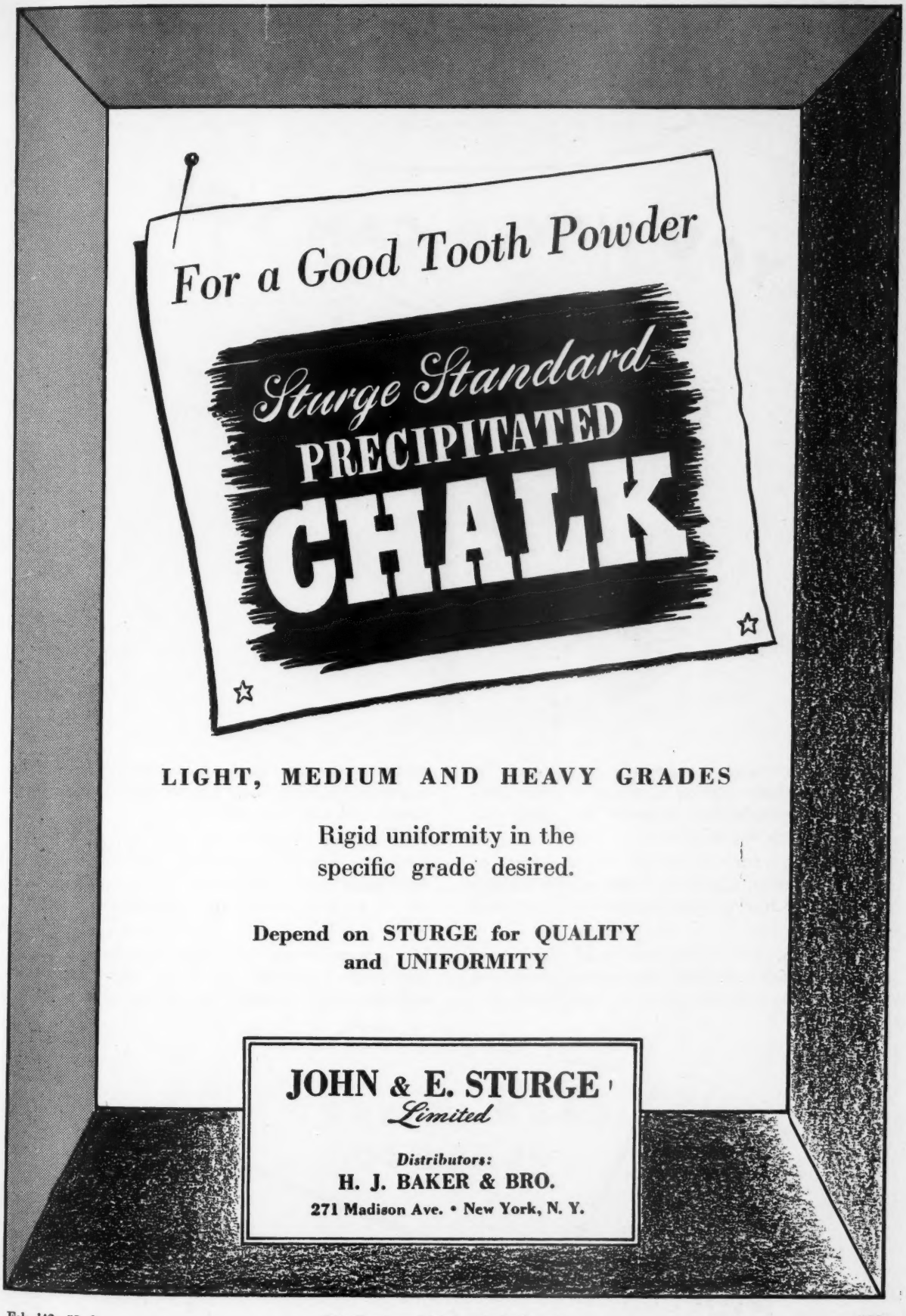
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Sturge Standard
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LIGHT, MEDIUM AND HEAVY GRADES
Rigid uniformity in the specific grade desired.
Depend on STURGE for QUALITY and UNIFORMITY
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Names aren't always especially revealing . . . a few little letters strung together phonetically may fail, completely, to make any clear cut impression on the mind.

So, when in your search for a new source of glass containers, the name CARR-LOWREY is suggested, it may not be symbolical of anything . . . to you.

Nevertheless, it *is* representative of a group of marketing, designing and production specialists whose skilled and experienced handiwork has wrought the glass packages which today enclose many of America's best known cosmetics, drugs, household and food products.

Painstaking attention to detail . . . extreme concern about precision . . . continuous insistence upon accuracy . . . these, too, are all synonymous with the name CARR-LOWREY.

No, *you never can tell* what is back of a name like ours . . . unless you've had the pleasure of working with an organization like ours.

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INDOLINE

Not a substitute for INDOL but a product superior in

LASTING QUALITY
SWEETNESS and
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DOES ANCHOR HOCKING MAKE A COMPLETE LINE OF STANDARD BLAKES, MR. LIGHTFOOT?
YES, WE DO— ALSO METAL AND MOLDED CAPS TO SEAL THEM

There's an Anchor Hocking Standard Blake in a size to fit every requirement. This top-notch bottle for pills, tablets, capsules and powders comes in 26 sizes, ranging from 1/6 ounce to 32 ounces. Easy to fill, label and handle on your production line. Requires a minimum of shelf space—a blessing to druggist and consumer alike.

To seal these and other glass containers for drugs, Anchor Hocking offers five types of metal and molded closures which combine efficiency with economy—the Anchor C.T., NKCT, Tricon, Amerseal and Molded Caps.

Samples of containers and closures with suitable liners for your product will be sent on request. Just tell us the capacity required.

An able and popular Anchor Hocking representative is C. L. Lightfoot, a member of the Anchor Hocking family for 23 years

Plan to attend the Eighteenth Annual Dinner of the Drug, Chemical and Allied Trades Section, Hotel Waldorf-Astoria, New York, N.Y., Thursday Evening, March 4th.

ANCHOR HOCKING

GLASS & CAPS

ANCHOR HOCKING GLASS CORPORATION · LANCASTER, OHIO

A SEAL OF SERVICE

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TRADE **LANUM** MARK

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(SUPERIOR WOOL FAT)

Lanum is a refined wool fat—specially prepared for medicinal and cosmetic use. It is a neutral and nonirritant permanent base for ointments, creams, and lipsticks, and appears to be more readily absorbed by the skin than other ointment bases. Lanum contains the higher fatty acid esters of cholesterol and isocholesterol; also the free cholesterols, including oxycholesterol.

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LANOLIN ANHYDROUS U.S.P.
COSMETIC GRADE
(exceptionally high quality, light in color)

LANOLIN ANHYDROUS U.S.P.

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also

LANUM HYDROUS
(Adeps Lanae Hydrosus U.S.P. Merck)

Quotations and samples will be sent to manufacturers on request.

Our Chemical Service Department will gladly assist you with your manufacturing problems.

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FINE CHEMICALS FOR THE PROFESSIONS AND INDUSTRY SINCE 1818

MERCK & CO., Inc. *Manufacturing Chemists* RAHWAY, N. J.

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ALLIED MANUFACTURING LABORATORIES AT SUFFERN, N. Y.

THE HANDS BEHIND THE HAND that applies Loveliness

The hands behind the hand that applies your cosmetics must of necessity be experienced, versatile, thorough, energetic and competent hands.

To these hands you, as a manufacturer, entrust your reputation. They hold the future of your business. For this very reason, expert knowledge must be at their fingertips. They must be the composite hands of an artist, scientist, craftsman, and business executive. These skilled hands must protect you against error. They must win consumer recognition and acceptance. And they must assure repeat sales.

Because Allied recognizes the great responsibility that it has to its customers, vigilance at this great plant is never relaxed. Constant rigid inspection by expert technicians of every product leaving the Allied plant is the reason for Allied's reputation for consistently high quality products. From the basic formula to the completed package on your dealer's shelf, every operation that has contributed to the finished product reflects the experienced hands that have been schooled in the Allied tradition of perfection.

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COMPACTS { ROUGE, POWDER, MAKE UP
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In compliance with the Pure Food, Drug and Cosmetic Act and WPB Limitation Orders.
Products Liability carried.

We also manufacture powder puffs, vanity puffs, loose sifter powder devices, etc.

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We have a job to do. A healthy industry behind a healthy war effort is going to accomplish the final Victory.

In co-ordination with our Country in its war needs, we are glad to pledge ourselves to the service of both Government and industry.

Oil of White Cedar
Oil of Cedar Leaf American Extra Quality
Oil of Balsam Fir
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Oil of Juniper Leaves American
Ionone A. B.
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Alpha Amyl Cinnamic Aldehyde
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Aromatics Division

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644 Pacific St., Brooklyn, N. Y.

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THIS IS *Packaging Insurance*

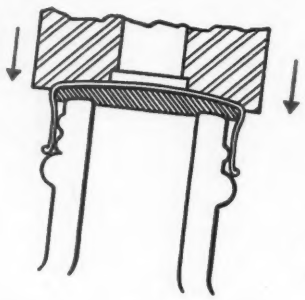
Plants with Packaging Insurance (Alseco Rolled-On sealing) just naturally stop worrying about leakers and breathers.

Alseco R-O Seals put an end to such things. These closures *have to fit*—they're tailor-made for each individual container, "min" or "max." (See diagram at right.)

This means your product stays *right* until the consumer gets it. It also means that R-O's can be removed easily. They're never wedged or cocked.

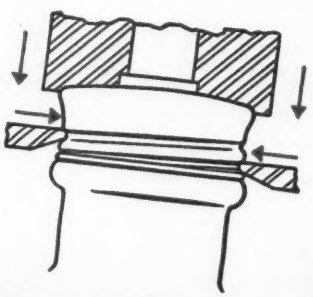
That's why Packaging Insurance helps build good will.

HERE'S WHY YOU GET "PACKAGING INSURANCE" BY THE ROLLED-ON METHOD OF SEALING



1. Plain-skirted Alseco Seal is uniformly seated. Under stationary top pressure, container lip is embedded in liner evenly all around.

2. While held in that position, threads are Rolled-On to conform exactly to threads on container. Each seal is tailor-made, fits perfectly.



Trade Mark Reg ALSECO SEALS U S Pat. Off.

Has Conservation Order M-104 Limited Your Packaging Operations? Anticipating these regulations, Alseco has perfected seals and liners to comply with them. These Alseco developments may well be the answer to your problem of sealing your allowable quota. Write for full information.

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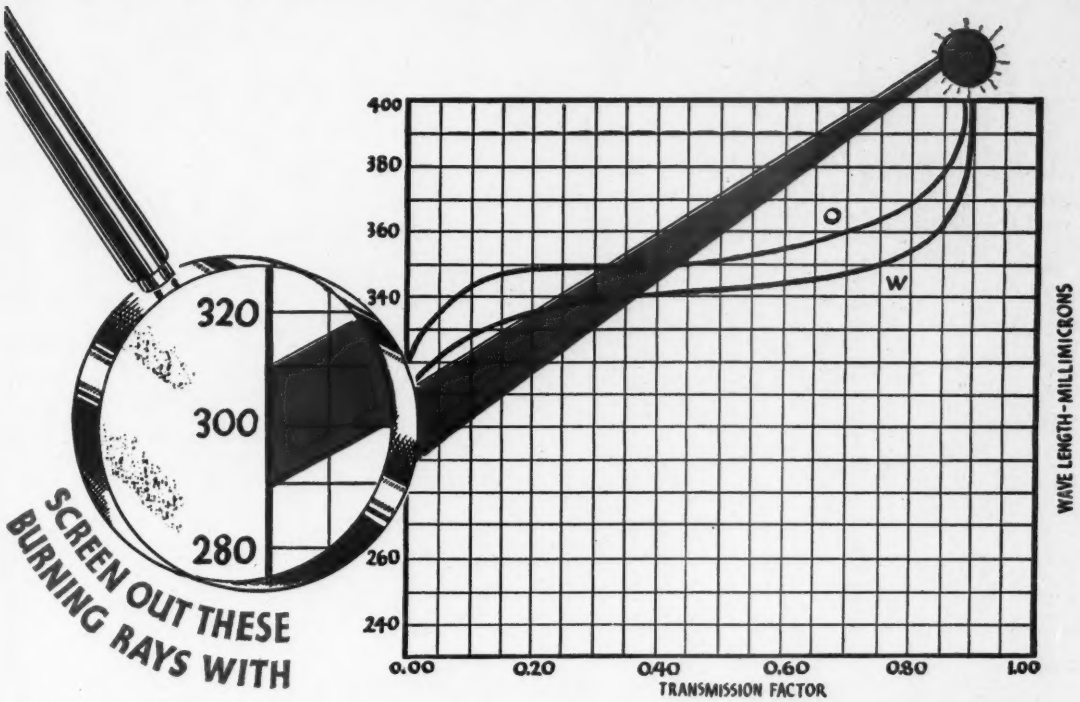
ALSECO SEALS

ALUMINUM SEAL COMPANY, 1525 THIRD AVENUE, NEW KENSINGTON, PA. ... at your service. 15 years of experience building quality seals and sealing machines

MAKE BETTER SUN-TAN PRODUCTS FOR LESS!



SUNAROMES

...FELTON'S EFFECTIVE SUN SCREEN PERFUMES

Just consider the many advantages you can enjoy from a product that not only perfumes your sun-tan preparations most attractively, but which in itself makes them very effective screens against the burning rays of the sun. Then you'll understand why Felton's Sunaromes have been widely used in the manufacturing of so many successful sun-tan products.

Sunaromes are supplied in a number of delightful fragrances . . . and you'll be amazed to see how easy it is to make fine sun-tan preparations with them!

All you do is mix Sunaromes with the base you prefer . . . water gum, water alcohol, or even water alone. You can also use a liquid cream base, mineral oil, fatty oil and others. It's the Sunaromes that make them effective sun screens . . . and scent them so attractively! The protection is positive . . . and there is no problem of skin irritation.

FELTON Quality

WRITE NOW FOR SAMPLES

And a leaflet containing complete data, prices and interesting formulas.

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Branches in Principal Cities

Manufacturers of Aromatic Chemicals, Essential Oils, Perfumes and Flavors

Rose

LONGCHAMP

Immediately upon entering a room, you can smell a bouquet of roses. The same amount of genuine otto or absolute contained in this bouquet would be scarcely perceptible and quite different in odor if sprayed throughout this room. The loss of certain characteristic substances in the process of obtaining these natural oils is responsible. For years we have sought these very substances, now used for the first time in Rose Longchamp. These new elements give Rose Longchamp that green, dewy emanation of red roses possessed by no other rose perfume.

SILTEX D APRES MONDRIAN

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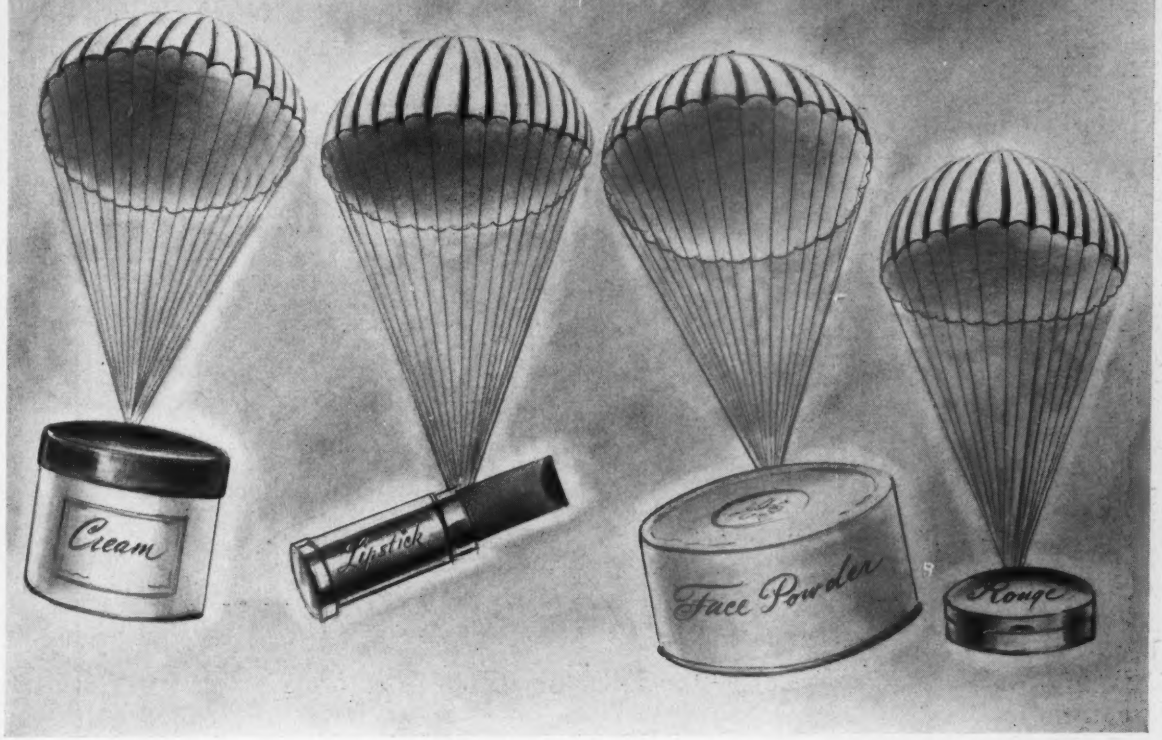
A Great Name in Cosmetics

HELFRICH



And a good name, too, because for so many years it has been associated with fine cosmetics, manufactured under private label exclusively.

Helfrich cosmetics have been tested under many brands, in thousands of stores and by millions of women. You will find each cosmetic a modern product of excellent quality chemically and physically and a product with a record of successful and repeat sales.

You may have some problem or some new product in mind. We'd like to talk it over with you.

lipsticks • creams
lotions • rouge compacts
creme rouge • face powder
eye shadow • cosmetique
powder compacts

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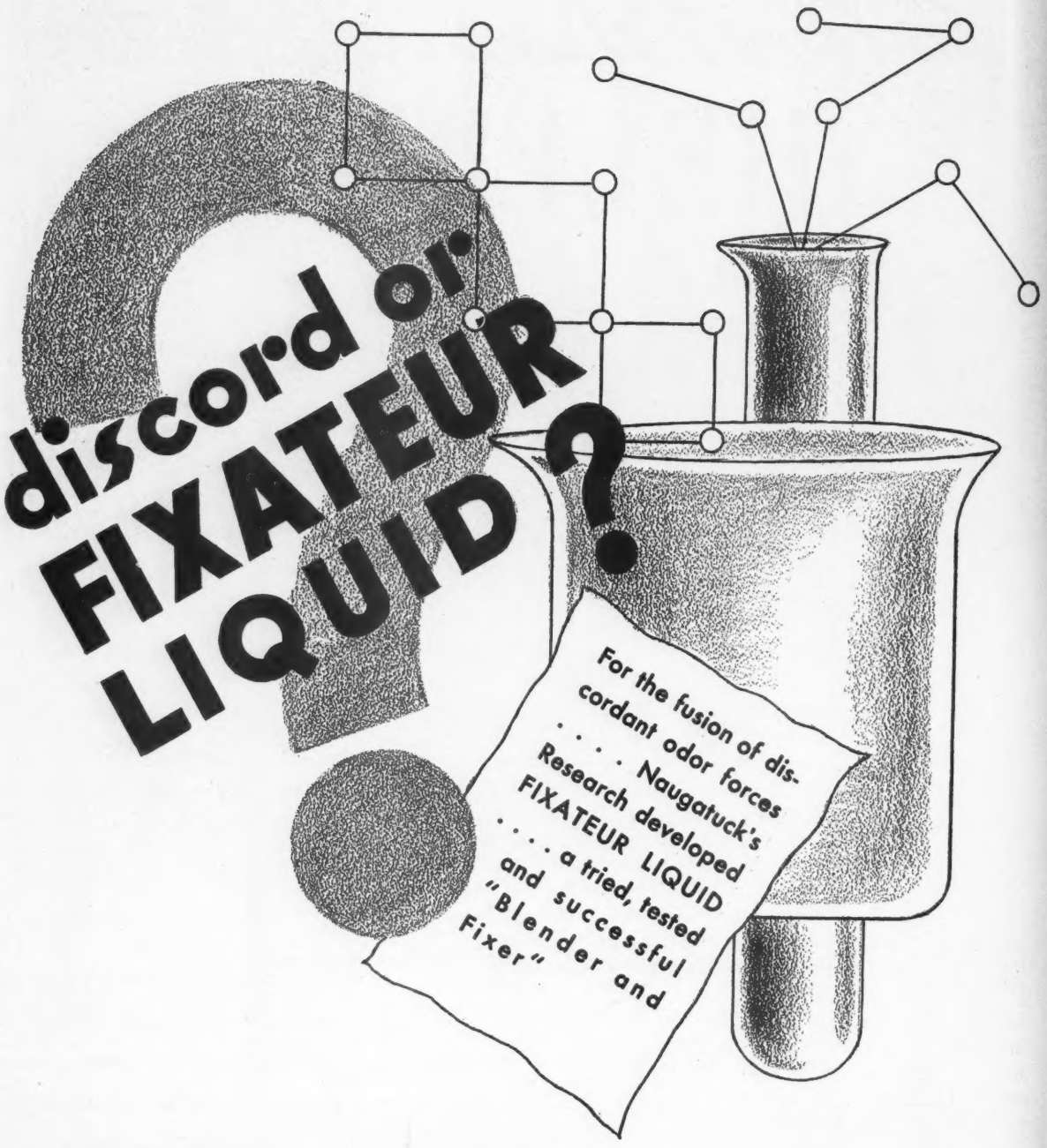
All inquiries and correspondence west of the Rocky Mountains should be addressed to our Chicago plant.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LIQUID
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For the fusion of discordant odor forces . . . . Naugatuck's Research developed FIXATEUR LIQUID . . . . a tried, tested and successful "Blender and Fixer"

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DIVISION OF UNITED STATES RUBBER COMPANY

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Sole Representatives for: BRUNO COURT, S. A., GRASSE, FRANCE C. A. P. P., CASABLANCA, MOROCCO

Analysis

• Chas. Pfizer & Co., Inc. has always regarded the careful and intelligent examination of all products as not only a necessary but also an important part of its manufacturing processes. We believe that the uniformity and high purity of our products cannot be assured without thorough examination and that it involves more than just the routine checking of materials against certain specifications.

The personnel of our Analytical Department is of the highest caliber and every effort has been made to make the most modern equipment available. Through thorough and careful analysis it has been possible for this department to make many suggestions which have resulted in improved products and improved methods of manufacture.

The research division of this department is constantly striving to improve or devise new techniques for the examination and analysis of our materials. New products, too, have always occasioned considerable analytical research, it often having been necessary to revise existing analytical methods to a great extent, or even to devise entirely new procedures. Needless to say, all of this would be impossible if analysis were considered to be merely a routine matter.

We feel that the reputation for dependability and high quality which our products enjoy is due in no small measure to our Analytical Department.

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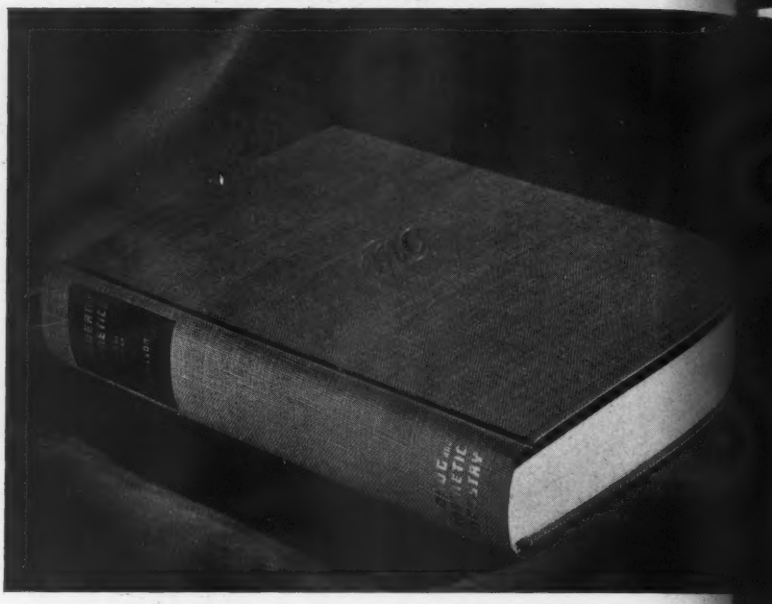
FRANCIS CHILSON



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Money In Vitamins

VITAMINS are bringing real rewards to the fishermen who go after them and bring them back. In January, a $30,000 catch in ten days is reported from Portland, Oregon. The catch—soup fin shark—was made in a ninety foot shark fishing boat off the mouth of the Columbia River, and was unloaded at Astoria, Oregon. Nine thousand pounds of soup fin shark livers were sold at $3.00 per pound, and the carcasses, for filleting, were sold at 3 cents per pound, dressed. Each member of the crew received about $3,000.00, and the captain received $6,000.00. Another boat landed on the same day at the same port with a mere haul of 3,000 pounds of shark livers, and 20 tons of carcasses, with a value of $10,000.00. Last year's record haul was sold for $60,000.00.

Asthma—Most Common Ailment

THE WAR has uncovered asthma as this country's most frequent ailment. Because of its prevalence and the high rate of absenteeism ascribed to it in war production plants, an all-out effort is being made to find a cure for it. A definite relief, if not a cure has been announced by Dr. Ira I. Kaplan, chief of the radiology division of Bellevue Hospital, New York, and his assistant, Dr. Sydney Rubenfeld. Relief is in the shape of high-voltage X-rays through the chest, ten to twenty minutes at a time, two or three times a week, for about three weeks. About 72 per cent. were relieved, and of these 40 per cent. had no recurrence. The effect of the treatment might be to eliminate two of the suggested causes of asthma—swelling of the lymph glands around the windpipe and the lack of certain antibodies in the blood. People who had asthma for the longest time were the most easily cured.

Dr. Norman M. Smith, of Minneapolis, has worked what seem miraculous cures with injections of ethylene disulfonate which apparently remedies the abnormal chemical activity causing the allergies that in turn produce bronchial asthma. One of his patients, a man of 23, had had such severe asthma all his life that he could not hold a job. Ethylene disulfonate injections relieved him to the extent that he was accepted by the Army. A 21 year old girl, asthmatic since she was four, and several times near death from attacks, improved to such an extent that she can even sing a solo without gasping for breath. Dr. Smith estimates that asthma has cost the American nation 200,000 potential soldiers.

Bedbugs as a cause of asthma is reported by two doctors who describe four cases which they can trace to sensitization by these pests. Three of the four patients had seasonal asthma, and the possibility by pollen was considered. All three improved when they changed their residence. Tests made with extracts of bedbugs gave strongly positive reactions. Patients were advised to remove the bugs from their homes by thorough cleaning, repainting and, if possible, change of furnishings. Two of three patients passed the summer of 1941 without attack. The doctors considered the odor, the bite, or the contact with the insect or its secretions may be responsible.

Sunburn and Aviators

SUNBURN is a real problem about which Army and Naval Air Force medical officers are expressing real concern. On long bombing flights at high altitudes, aviators have returned seriously burned. Instead of resorting to cosmetic sun screens, however, the armed forces are resorting to a special formula Lumarith cellulose acetate base transparent aircraft plastic which screens out all of the severe sunburn producing ultra violet rays. The use of this plastic in place of acrylic type plastics prevents painful or harmful sunburn, and allows no more than the possibility of some reddening of the skin.

Bismuth Under Allocation

BISMUTH has not been placed under full allocation under Conservation Order M-276 issued January 19.

Isopropyl Alcohol Restricted

ISOPROPYL alcohol is now under complete allocation following an amendment to Preference Order M-168 issued January 19. Persons seeking isopropyl alcohol during any month must file application on or before the 10th of the preceding month on Form PD-600. Deliveries of 54 gallons or less during any month are exempt from the order.

Glycerine Control to Agriculture

THE Fats and Oils Section of WPB has been transferred to the Food Distribution Administration of the Department of Agriculture. Included in this Section is the Soap and Glycerine Unit. M-58 will be amended to identify glycerine with Secretary Wickard's Department rather than with WPB.

Quinine Drive Intensified

THE need for quinine for the armed forces is extremely urgent. Everyone in this industry doubtless understands the reason why. Quinine is the preferred antimalarial, and malaria is a very serious problem for the troops fighting in the tropical countries. Therefore, the effort to obtain for the use of the armed forces all the available quinine in this country is being intensified. For some time, druggists of the country have been urged to return their unopened packages of quinine to their suppliers for credit. The suppliers then turned this quinine over to the Government for use of the armed forces. Opened packages of quinine presented a problem. But now the American Pharmaceutical Association has offered to receive opened packages at their headquarters in Washington where the material in them will be assayed. It is most urgent that all retailers, wholesalers, or manufacturers who have any quinine move it into the proper channels so that the armed forces will get it. It is also up to manufacturers and wholesalers to impress the retailers with the importance of this movement.

Antimalarials

DR. AUBREY H. Hamilton, Lieutenant-Commander in the U. S. Naval Reserve Force, has prepared, in collaboration with the Bureau of Economic Warfare and the Department of Commerce, a report entitled "Malaria and the Antimalarials." An accompanying letter from the Drugs and Pharmaceuticals Unit of the Bureau of Foreign and Domestic Commerce, of the Department of Commerce, states:

"The literature is full of advertising matter, educational material, or propaganda on the natural product originating from the quinine monopoly or on the synthetic antimalarials from the German monopoly, I. G. Farben. This was the accepted situation prior to the outbreak of this World War, subsequent to which the United States was obliged to establish its own sources of supply for antimalarials. The people of the United States and our Government have a deep interest and a great stake in this field of malaria and the antimalarials, and it seems entirely fitting that emphatic efforts should be devoted to building up our own literature based upon our own experience and findings, uncontaminated by the foreign monopoly influences cited above."

Dr. Hamilton, who has had twenty years experience in Java, refers especially in his report to Southeast Asia, but he also treats the subject of malaria and the antimalarials in a general way. In his conclusions, Dr. Hamilton says in part:

"Workers in Southeast Asia favor the use of quinine hydrochloride in preference to quinine sulfate for treating malaria. The dose of the latter must be about 25 per cent. higher than that of the former to obtain equivalent antimalarial results and the untoward effects of cinchonism are less marked with the hydrochloride. Moreover, by its routine use only one salt is required for both oral and parental administration.

"Fletecher's statement that an acute attack of malaria always yields to quinine swallowed, retained and absorbed and that twenty grains of the sulfate for five to seven days was quite effective are corroborated by twenty years of experience in the Netherland Indies with an equivalent dose. We used 7½ grains of the hydrochloride twice a day for seven days (105 grains in all) by mouth on a full stomach as a routine treatment for all forms of malaria (except in some cases of subterian, where we raised the dose to 10 grains a day).

"Although there is some disagreement in the literature on the antimalarial value of the byalkaloids of cinchona bark, there appears to be no doubt that quinidine, cinchonine, and cinchonidine have very high antimalarial values.

"Quinacrine hydrochloride, or Atabrine, is probably not more effective than quinine, either in causing the disappearance of plasmodia from the blood and thereby terminating an attack of malaria, or in preventing relapses. Atabrine is relatively nontoxic when compared with Plasmochin but is more dangerous than quinine. Its toxicity appears to be somewhat capricous. American-made Atabrine is not more toxic than the German-made product, but both are capable of producing unfortunate and undesirable effects.

"The use of the synthetic antimalarials *at present available* is fraught with danger of untoward results."

In describing the method treating malaria with the Atabrine, Dr. Hamilton says in part:

"Pay no attention to the development of a general discoloration of the skin—this is probably due to dyes in the drug and not a liver involvement. Watch carefully, however, for yellowing of the whites of the eyes: this indicates liver pathology and is an indication for the prompt cessation of administering Atabrine.

"It should be remembered that a weakened heart does not react favorably to Atabrine. The heart action should, therefore, be most carefully controlled at least twice daily if Atabrine is being administered, and it would be well to have the leukocytes studied at least daily during the course of the administration to forestall the onset of agranulocytosis, a complication which we have seen on several occasions. Any tendency to cyanosis is an indication for stopping the administration of the drug immediately and switching to quinine.

"In relapses: If the first attack has been treated with Atabrine it is highly recommendable to treat the patient with quinine during all subsequent relapses.

"Prophylaxis: Both Atabrine and Plasmochin are too potentially toxic for use in prophylaxis. Although the percentage of cases reacting unfavorably to the latter drug is small, when used for large numbers of men such as an army of reoccupation or invasion, the actual number of such persons would be too large to warrant its use."

In a discussion of prophylaxis, Dr. Hamilton says:

"It is true that Plasomochin if administered in doses of above 60 mg. (1 grain) daily will prevent the development of parasites injected almost immediately subsequently to the commencement of the course, but such doses are impossible in practice because of the toxicity of the drug. Atabrine also is too generally toxic for use in the doses that would be required to engender a true causal prophylaxis.

"It has been proved by practical experience that daily doses of quinine less than 10 grains a day of

the sulfate are uncertain as clinical preventives of malaria, although several British authors claim success for from 6 to 8 grains. On the other hand, doses of 10 grains and up administered daily on a full stomach have been found to be generally satisfactory. Such doses require the use of 70 grains of quinine sulfate a day per man."

With reference to use of quinine and synthetic anti-malarials, Rear Admiral Ross T. McIntire, Surgeon General of the U. S. Navy, in stressing the need for getting all available quinine for the armed forces, says:

"Although Atabrine is a very valuable anti-malarial drug, there are many individuals in whom quinine is still the drug of choice and in certain cases it is life-saving and cannot be replaced by synthetic drugs. Our medical officers are using the synthetic anti-malarial drugs whenever it is possible to do so, but the need for more quinine is becoming increasingly urgent as the number of men fighting in malarious regions increases and the stockpile dwindles."

Sugar for Medicines

THE sugar rationing order No. 3, issued in April 1942, cut to seventy per cent of the amounts formerly used, non-food products, drugs and medicines, soaps, tobacco, insecticides, adhesives, and leather. Ridiculous as it seems, drugs and medicines—which are certainly essential to the public health—are classified with such things as tobacco, adhesives, leather, and other commodities. Efforts to obtain a reclassification of drugs and medicines have been of no avail. Drug manufacturers are believed to be relatively small users of sugar, and the cut of thirty per cent in their consumption is not believed to be a very large contribution to the effort to conserve sugar. It is up to manufacturers to get together the actual figures of the consumption of sugar in drugs and medicines, and then make a real attempt to have this condition remedied.

Objectionable Tin Treaty

NO LESS a publication than the Manchester Guardian complained late last year regarding a new international tin agreement which was issued as a formal treaty last October. To quote:

"If the promise of free access to the world's raw materials made in the Atlantic Charter meant anything it meant that such restraints as the pre-war tin restriction would not be repeated. Yet the agreement binds the Governments of the United Kingdom, Bolivia, Belgium, and the Netherlands to the maintenance of the old principles.

"In practice the pre-war tin control, trying to stabilize the price at an excessive level, failed conspicuously to keep up adequate tin supplies. Its effects were damaging to the interests of large producing countries like Malaya as well as to those of all consumers, and especially of the United States. It is startling to see it resurrected.

"The only valid guarantee against a repetition of past mistakes would be to give consuming interests a real voice in deciding the volume of world tin supplies. In the new scheme the number of consumers' representatives is raised from two to three, but they have, as before, no other right than to attend the meetings and to 'tender advice.' Voting rights are reserved for the fifteen representatives of the producing countries.

"The agreement contains in Article 3 an opening for amendments. It is to be hoped that Parliament will insist on its use. Otherwise a dangerous precedent will have been set for disregarding the principles of the Atlantic Charter as soon as they appear to clash with the interests of particular industries."

Dr. Reid Again Advanced

DR. Ernest W. Reid has been named Deputy Director General for Industry Divisions of the WPB. Dr. Reid succeeds Curtis E. Calder, who has been advanced to Director General for Operations. Dr. Reid will be remembered as Chief of the Chemical Division of the WPB, from which position he was advanced to Director of the Commodities Bureau in November 1942. In the position from which he is being advanced he was in charge of the Chemicals, Printing and Publishing, Pulp and Paper, Cork and Asbestos, and Containers Divisions of WPB.

Prior to coming to Washington in June 1940, Dr. Reid was a Senior Industrial Fellow for the Mellon Institute of Industrial Research, Pittsburgh, and also Director of European Affairs for Union Carbide and Carbon Company. Earlier, he had been Director of Sales Development and plant supervisor for the Carbide and Carbon Chemicals Corporation, South Charleston, W. Va.

Appley—Manpower Director

LAWRENCE A. Appley, vice-president of Vick Chemical Company has been named executive director of the War Manpower Commission, holding complete administrative authority over all phases of the staff services, planning, and operations. Mr. Appley has been with the Commission since December 30 when he was appointed director of the Bureau of Placement. He came to the Commission from the War Department where he had served as special assistant to the Secretary of War on civilian personnel.

Immunity from Sherman Act

THE U. S. Supreme Court, in the case of U. S. vs. William F. Monia and L. Aubrey Williams, recently decided that anyone who, in obedience to a subpoena, appears before a grand jury inquiring into an alleged violation of the Sherman Act, and gives testimony under oath substantially touching the alleged offense, obtains immunity from prosecution for that offense although he does not claim his privilege against self-incrimination.

This decision should be of real interest to this industry because of the grand jury investigation in the case of U. S. vs. N. W. D. A. et al.

Deleterious Products Banned

WPB is not only directing the flow of materials into the proper channels for successful prosecution of the war effort, but it is also issuing orders prohibiting the marketing of harmful substitutes for those items which are short for civilian use. As an example, Limitation Order L-258, issued January 20, prohibits the marketing of deleterious anti-freeze solutions. A deleterious anti-freeze solution is defined as "a solution designed to prevent freezing in the cooling systems of automotive and other types of internal combustion engines of

the liquid-cooled types, when compounded of aqueous solutions of calcium chloride, magnesium chloride, or sodium chloride; or when compounded of petroleum distillates, including, but not limited to kerosene and/or fractions of higher boiling ranges."

Johnson to Smaller Plants Corp.

COL. Robert Johnson, chief of the New York Ordnance District, has been appointed to replace Lou Holland as chairman of the Smaller War Plants Corporation, which has as its aim the securing of contracts for smaller factories. Col. Johnson, who is on leave of absence from his position of chairman of the board of Johnson & Johnson, was appointed at the request of WPB Chairman Donald M. Nelson. Col. Johnson will also become a vice-chairman of the WPB Smaller Plants, the operating branch of the Smaller War Plants Corporation.

A.M.A. Loses Suit

THE American Medical Association failed to convince the U. S. Supreme Court that it did not come within the meaning of the provisions of the Sherman Act by conspiring to block the activities of Group Health, Inc., a Government employee cooperative medical movement. While the decision of the court did not mention whether it considered the practice of medicine as a "trade" in the meaning of the act, it did say that the A.M.A. and the District of Columbia Medical Society conspired to restrain Group Health, which was operating within "the sphere of business." The decision refused to hold the medical societies immune from prosecution, and stated that their dispute with Group Health was covered by the Clayton and Norris-LaGuardia Acts.

We don't know whether it is possible or not, but we think that if we had anything to do with the A.M.A. or the medical profession, we would try to organize a union. With the special laws which are in effect to protect the unions, the A.M.A. could do lots of things that might not be legal under their present status.

Rationing Medical Services

MEDICAL services for the duration and for several years thereafter will be rationed according to Dr. George Baehr, of the U. S. Public Health Service and Chief of the Medical Division, Office of Civilian Defense. Luxury medical services to which Americans are accustomed must be eliminated. These include full time attention of one or two private nurses in a hospital if the nature of the illness is such that the nurse can attend patients in nearby rooms; going to a hospital just for a rest or for clinical diagnosis that could be made by visits to doctors' offices; calling a doctor to a house when the patient could be safely taken to the doctor's office or treated by someone at home following telephone instructions.

Suggestions made are: Call on the doctor at times when those who must work specified hours are not calling; do as much of the consulting with the family doctor as possible over the telephone; don't expect the doctor the minute he is called; help educate people to do some things for themselves; don't demand or expect luxury services.

Dr. Baehr predicts that the need for rationing of medical services will continue for several years after the war. He says:

"It appears now that during the immediate reconstruction period following the war occupation of many countries by the armed forces of the United Nations will be necessary to keep peace and order. Many of these countries we will have to occupy have never had adequate sanitary or medical conditions. In others the best doctors will have been killed or used up by the enemy. In all these places, American doctors, nurses, and laboratory workers must go along to protect the health of our forces. This means providing enough medical service that the health conditions in those countries as a whole can be controlled."

In spite of the war drain on American doctors and nurses, Dr. Baehr said, adequate health and sanitation facilities will be maintained in this country. Careful watch is being kept that too many doctors are not taken from any community and thousands of Civilian Defense workers are being trained to work as Nurse's Aides, hospital assistants, and in other capacities. Although there are more than 75,000 Nurse's Aides now in service or in process of training, there is need for two or three times that many volunteer workers.

Cosmetic Service Charges

COSMETIC manufacturers and distributors have been warned by OPA not to advance their charges for replacing or reprocessing returns of faulty or damaged merchandise. A manufacturer who customarily replaced merchandise which was unsalable due to some fault of manufacture without making a charge may *not* discontinue this practice. Neither can a manufacturer increase his customary charge for reprocessing or replacing shopworn merchandise. Prohibited increases include outright additions to dollar and cent charges, compelling purchasers to bear transportation costs not ordinarily borne by them, and instituting typing requirements not imposed in March 1942. Examples of prohibited conduct are requiring a special purchase order of a minimum amount as a condition of reprocessing, or requiring retailers to accept other types of merchandise in place of the reprocessed items, where these conditions were not imposed in March 1942, upon purchasers of the same class.

Drug Store Sales

DRUG store sales were far above the average for all retail stores during the latter part of last year. Reports from the Department of Commerce give the following indices: Drug stores 163.9, against all stores average of 117.6 for September; drug stores 174.0, against 119.5 for all stores for October; and drug stores 174.6, against 122.5 for all stores for November.

Cinchona Bark Search

THE Board of Economic Warfare announced on the first of this month that a party of experts headed by Llewelyn Williams were starting a survey of Peruvian areas in search of new supplies of cinchona bark. Mr. Williams is an authority on tropical plants and served as the leader of a botanical expedition to Peru in 1929-1930.

Grocers Handle Drugs

THE Independent Grocers' Alliance is urging its members to turn to new kinds of merchandise and is introducing a new line of drugs, cosmetics, and other sundries not usually associated with grocery stores to fill out the volume of its member retailers this year. J. Frank Grimes, president of the Alliance, says that grocers face a drop of nearly twenty per cent. in sales volume this year because of rationing and food shortages unless new lines are introduced. The new drug and cosmetic line consists of about seventy items, including common home remedies, face creams and powders, facial tissues, hair tonics, skin lotions, and other similar items. In addition there has been introduced a line of baby supplies including nipples, bottles, and powders. According to Harold Meyer, in charge of this new venture, no pharmaceutical products or "drugs in the literal sense of the term" will be carried in the new line. "What we have added is really a line of sundries and notions," he said, "you might call them drugs, but that word has ceased to have much meaning since s—called drug stores began selling sandwiches and waffle irons."

Druggists Look for Sales Drop

NOT only the grocers but also the chain and independent druggists are looking to the future with apprehension. The druggists anticipate a sharp drop in sales volume for the reason that they will not be able to obtain sufficient goods to sell. While druggists will probably be able to obtain sufficient quantities of essential drug products to meet the demand, they will not be able to obtain the free supplies of cosmetics and other products that formerly were available to them. All of this means that they will have to curtail their operating expenses if they expect to continue to operate profitably on a smaller volume of business. As supplies of all sorts of goods become less, all types of retail stores will try to maintain their sales volumes by handling items which were formerly handled by other types of retailers. Thus the available merchandise will be spread very thinly among the retailers and three or four retailers in every block will be handling the same type of merchandise and be competing directly with each other.

Agar Off California

FOUR new species rich in agar have been found in seaweed beds off the Southern California coast, these beds being known only to Japanese seaweed farmers in pre-war days. Robert H. Tschudy and Marston C. Sargent, of the University of California, state that all four species of seaweed "readily yielded agar, in quantity and quality equal to that obtained from other species at present exploited. Japanese divers, working in secrecy, formerly harvested tons of seaweed off the coast south of Los Angeles, dried the product and shipped it to Japan for refining.

Pricing Drugs and Cosmetics

AN AUTOMATIC pricing formula is being developed by OPA by which manufacturers of drugs and cosmetics can price new products, or by which they can readjust the prices of existing products if they are compelled to change the formula of any of these products due to war shortages. Some of the anticipated provisions are: A change in the container or the closure does not necessitate a price change; a change in formula reducing the cost not more than 10 per cent. does not necessitate a price change; all references to Fair Trade prices are eliminated and provision that Fair Trade minimum price might be the maximum ceiling price has been deleted from the first draft; if very extensive changes are made in the formula, the product might be considered a new product.

In pricing new products the manufacturer may start with the retail price, catalog price, or wholesale price, depending upon which he uses as his base price. The price of the new product is the direct unit cost of the new product multiplied by the markup on the most closely comparable product. The markup of the old product is determined by dividing the base price of the old product by its unit cost.

In determining the price from the wholesaler to the retailer, OPA is considering a markup factor of 1.5 for proprietary medicines and 1.8 for pharmaceuticals. This would set the price of proprietaries on the same basis as present, the retailer paying 66 2/3 cents for a dollar item, while a pharmaceutical for which the retailer paid 66 2/3 cents would sell at a top price of $1.20.

A most comparable product must be marketed through the same or similar channels, it must be in the same general class, it must serve the same or similar purpose, it must be in the same or similar form, it must be of the same or similar quality.

If a manufacturer has a limited number of products and has difficulty finding a comparable product, he may select the product in his line having the lowest markup. If for any reason, such as high cost of research work, he cannot price his product by any of the suggested methods, he must apply to OPA for a price formula. And where it is necessary to file with OPA, if he does not hear from them within twenty days, his suggested price as filed stands as his maximum price.

The matter of printing maximum prices on the labels of products has not been decided. A provision might be made that manufacturers must notify wholesalers and retailers of the maximum prices of new and changed products. It is probable that a tolerance of twenty per cent. will be allowed with reference to packaging and distributing products above or below eight ounces, with other tolerances for other changes in quantity. There will probably be separate regulations for drug products and cosmetics.

Off Again—On Again

PRICING of drugs and cosmetics, under the OPA, which was originally under one head, then under two separate heads, then under one head, is now under two heads. Originally Frank Delgado was the chief of the division of OPA which had to do with the pricing of drugs, pharmaceuticals, vitamins, cosmetics and toiletries. Then Robert W. Burns was appointed chief of a separate division which took over the pricing of vitamins, cosmetics and toiletries. But last month the two divisions were consolidated and the pricing of all of the products was again placed under the direction of Mr. Delgado. Finally on January 29 the divisions were again separated with Edward P. Morrish at the head of a division which has control over the

pricing of cosmetics and toiletries. Mr. Morrish, who has been with OPA for some time past was formerly associated with manufacturers who supply cosmetologists. He has as his assistant, Martha Wood, who was formerly with Lucien Lelong.

Plastic Supplies

ON THE subject of plastic supplies, Ralph H. Ball, of the Organic Plastics and Resins Section, Materials Division, Chemical Division, WPB, states:

"Our problem of maintaining supplies of plastics to meet war needs is as much one of insufficient plants for the synthesis of resins and plastics themselves as of basic chemical shortages. Our major raw material shortages are phenol, cresols, cresylic acid, and furfural for tar acid resins; benzene for polystyrene; nitric acid for nitrocellulose; and phenol and cresol for triphenyl phosphate and tricrysyl phosphate plasticizers. Other shortages and threatened shortages are ammonia for urea, cotton linters for the cellulose esters, and phthalic anhydride and octyl alcohol for phthalate plasticizers. Many other chemicals required for plastic manufacture are not in good supply, but the plastics are filling such important war uses that we anticipate no difficulty in obtaining sufficient quantities of these raw materials.

"We might divide our plastics into three groups: (1) those which are available in fairly good quantity for civilian use, (2) those which are highly restricted even for military use, and (3) those which fall in between the first two groups. In the first group are urea-formaldehyde, cellulose acetate, and cellulose acetate butyrate. In the second are cresol-formaldehyde laminates, the methacrylates, and the vinyl resins. The other plastics may be put in the intermediate group, with several already headed for the critical category.

"There are threats to our supply in the case of each plastic in the first group from an essential raw material, from projected new military use, or from a combination of both. It would, therefore, be hazardous to promote new civilian uses which are of questionable importance in a wartime economy. New developments should be confined to essential items which will be a real contribution to winning the war."

Certified Colors Restricted

CONSERVATION Order M-103 as amended January 21 sets up a drastic restriction in the use of dyes and certified colors. Four classes of dyes are set up. Classes A and B list dyes which are not of interest to this industry. Class C includes a limited number of certified colors, and Class D contains a very considerable number of certified colors. The only certified colors which do not fall within the restrictions of the order are: FD&C Reds Nos. 1, 2, 3, 4, 32; FD&C Yellows Nos. 1, 2; D&C Green No. 8; D&C Reds Nos. 5, 10, 11, 12, 13, 18, 34; Ext. D&C Green No. 1; Ext. D&C Reds Nos. 8, 9, 10.

All other certified colors are restricted to $400 in value or 60 per cent. of 1941 consumption, whichever is higher. However, the restriction is written on a dollar basis computed from the domestic consumers contract sales prices as of January 1, 1943. Acceptance of delivery or use during any calendar quarter of 1943 must be equal so that during any calendar quarter no one may accept delivery of or use a total 1943 dollar value in excess of $100 or 15 per cent. of the total dollar value which he used in 1941 whichever is higher.

Because of the fact that the amount of dyes consumed in all the certified colors used does not amount to more than 1½ per cent. of the total sales of dyes, an attempt is being made to have certified colors exempt from the provisions of the order. Certified colors are essential to the production of foods, drugs, and cosmetics, and therefore it is hoped that the request for an exemption will be granted.

Convention Times and Places

ARRANGEMENTS are being made for the annual conventions of the associations in this industry. Naturally, these conventions are being curtailed in the time being given to them. Furthermore, plans for most of them are being arranged in large cities so that transportation facilities can be obtained. The entire time will be given to business sessions. Because of the essential character of the industry it is believed that these meetings will be held as scheduled, but last minute changes or cancellations are possible due to developments in transportation facilities which might arise.

The Proprietary Association has definitely set its time of meeting as May 18 and 19 in the Biltmore Hotel in New York. The Toilet Goods' Association has released its dates of May 4 and 5 at the Waldorf-Astoria Hotel in New York and has rescheduled its convention for May 12 and 13 at the same hotel. The announcement from the T. G. A. stated that the change was made for the purpose of allowing the American Drug Manufacturers' Association to hold its convention at that time.

The American Drug Manufacturers' Association has since announced that its convention will be held at the Palmer House, Chicago, with the tentative dates set for May 3 and 4, and with the possibility that this may be changed to have the meetings start on May 2. The American Pharmaceutical Manufacturers' Association has planned its meeting for the Homestead, Hot Springs, Va., on June 14 to 17. No change in this plan is apparently being considered until the necessity arises.

No matter where the conventions are being held this year, it is important that those who want to attend reserve their hotel accommodations, and their railroad accommodations just as soon as they possibly can. New York hotels are crowded. Chicago has had some of its largest hotels taken over by the armed forces, and the Homestead is one of the very few resort hotels left available.

Restrict Container Strapping

SHIPPING departments will have to change their methods in some instances due to the use of metal strapping being curtailed by WPB Conservation Order M-261 issued January 25. The order prohibits the use of metal strapping on bundles unless: The package weighs more than 90 pounds; the weight of the contents exceeds 0.058 pounds per cubic inch (100 pounds per cubic foot); use is required by regulations of the Interstate Commerce Commission; packages are to be delivered to the armed forces, Maritime Commission; or War Shipping Administration; shipment is for export outside of both the United States and Canada; strapping is to be used for packing fresh fruits, vegetables,

meats, fish, or poultry, if strapping is essential and has been customarily used for this type of shipment; strapping is for wood lard or butter tubs, wooden buckets and pails; strapping is for closing fibre drums or hexagonal or octagonal fibre containers.

Rotenone Under Allocation

ROTENONE has now been placed under full allocation through the Amended M-133 issued January 26. This change is due to the fact that WPB estimates that the available supply during 1943 will be less than fifty per cent. of the demand. Causes of the shortage are that more than sixty per cent. of our rotenone comes from the Far East, and imports from Peru and Brazil has been limited by shipping difficulties as well as by time required to expand production.

Alcohol Plants for India

ALCOHOL plants constructed by American firms in India are being planned according to information contained in a letter written to Senator Gillette (D., Iowa) by Leo M. Christensen, who is in charge of a chemurgy project at the University of Nebraska. On January 26, Senator Gillette read the letter into the record of a Senate agriculture subcommittee of which he is chairman. In the letter Mr. Christensen stated that an engineer friend had advised him that "he had learned that 10 or 12 new alcohol plants will be built in India" with American equipment. "He said that the equipment would all be new and that copper would be used for the stills," the letter stated, "I believe the Acme Coppersmithing & Machine Co., Oreland, Pa. will build some of the equipment. It is probable that the Dorr Co., 570 Lexington Ave., New York City, may have a general engineering contract, or that United Engineers, Philadelphia, may be in the picture."

Figure that one out if you can.

Pilfering

PILFERING is a new trouble for importers. Always present in small amounts, particularly in the case of small bulk, high value merchandise such as perfume oils, it is now said to be a real serious problem. The reason behind the increase in this difficulty is the lack of shopping containers and cases which is so stringent that all sorts of devices are being used. These makeshift methods of packaging make it fairly easy and more inviting to break open a shipment. African shipments are said to be subject to this annoyance to a greater extent than shipments from other places.

Vitamins in Foods

THE Department of Agriculture, which no longer has anything to do with the Food and Drug Administration, has been fighting for some time to obtain complete control over vitamin supplies and distribution. It is the desire of Agriculture to incorporate considerable quantities of vitamins in bread, flour, and many other types of foods. They are trying to increase the quantity of vitamins in various foods so as to overcome deficiencies and thus do away with vitamins in tablet and capsule forms except those of very high potency which are used by the medical profession. It is possible that the present supply of vitamins would not be sufficient to satisfy the demands created by Agriculture and also the medicine manufacturers, but it does not seem at all likely that Agriculture will obtain the control it is after.

Ascorbic Order Eased

ASCORBIC acid (vitamin C) restrictions have been eased by amendment of General Preference Order M-269 as amended February 2. The amendment dispenses with special WPB authorization for shipment of ascorbic acid to a processor for incorporation into capsules when the title to the material is retained by a drug manufacturer. Prior to this amendment, the drug manufacturer had to obtain permission from the Director General before he could ship his ascorbic acid to be capsulated.

Drugs in War

SOME idea of the importance of the drug manufacturing industry in the war effort is obtained from a twenty-four page booklet distributed by the OWI entitled, "Tale of City." The book, which is the story of what has happened to Warsaw, and which points out that the same fate will befall Paris, Oslo, Rotterdam, Belgrade, Brussels, and every village, city and nation that falls to the Nazis, has the following to say about health:

"Warsaw is dying out. Deprived of the necessary fats and vitamins, the population falls easy prey to disease, Exhaustion, hunger, and cold have forced many people to stay permanently in bed. In the first half of 1941, 8,000 persons were born in Warsaw, but 21,800 died. In 1941, 9,000 died of tuberculosis, compared with 3,000 in 1938. In the first eight months of 1941, typhus took a toll of 5,592 persons, compared with 23 in 1938. Children are malformed and ghostlike, suffering from anemia and softening of the bones."

Convert to War Work

AS THE war effort continues to become more intensive and demands for materials for the Armed Forces, Lease-Lend and other government needs become greater, the pinch on materials for civilian markets become tighter. Within the next few months all manner of things are going to become much more scarce and stocks of civilian products are going to become depleted far beyond the point at which they now stand.

Manufacturers who have not attempted to convert to war work should make every effort to get as much of this work as they can handle so that if they are not able to get supplies to fill their civilian demands, they will not suffer to too great an extent from loss of business. This is no time for manufacturers to go on the theory that war work is not in their line and will not aid them in building the standing of their companies with their customers; rather manufacturers must realize that this is a time when they must do what they can to survive. The war effort is going to be the main consideration of the country until it is won and everyone must make up his mind to this. And there is no easy and quick way to win a war,—the road is the only one open to us, as is the case in every war that ever has been fought. Therefore, manufacturers must put up with all the hardships of shortages of materials. They must make all the changes and substitutions that are required. And if they are then unable to continue, they must convert to war work or go out of business.

COSMETIC CAMOUFLAGE

The Army has specifications for creams and sticks to be used by our soldiers in camouflaging their faces and hands.

PRESS ASSOCIATION

FOR a full year we have been pointing out ways in which the cosmetic manufacturers of this country could be of real direct aid to the war effort. We have published many articles suggesting various types of special cosmetic preparations that could be of real advantage in very large volume by our armed forces. Among other things we long ago suggested camouflage preparations for concealing the shining white hands and faces of our troops. We also suggested preparations of fats and greases to protect soldiers in the cold climates from frost bite and sunburn of the skin and lips. We suggested insect repellents, foot powders, anti-glare creams and several other types of preparations particularly adaptable to protecting our armed forces and making of them tough fighters of high morale.

A few months after publishing our first article, a representative of the Cosmetics Division of WPB stated that this article annoyed him because the division had numerous inquiries from cosmetic manufacturers asking what products they could make when none had been planned.

Since that time, however, the cosmetic industry has been called upon to make products for the armed forces. To our surprise recently, pictures began to appear of our troops camouflaging their faces and hands with plain ordinary mud. We devoted the front cover of our November 1942 issue to this, and, on page 522 of the same issue we asked why such risks of infection should be taken in tropical countries when safe products for this use could be turned out in quantity by cosmetic manufacturers.

Now the situation is changed and the Army has drawn up specifications for camouflage colors to be used by our troops. The color will be made in two forms—cream form and stick form. There will be two colors—light green, and loam green. The specifications as to the quality of the products are such as are required of any good quality cosmetic. They must not be packaged in highly critical materials such as bronze, brass, copper, aluminum, rubber, and so forth. The compounds must be of a high melting point suitable for use predominantly in tropical countries, but the stick form must be such that it can also be used in areas of temperatures down to 20° F. The compounds must be free from ingredients harmful to the skin, they must be free of excessive greasiness, must be easy to apply by hand, must be water repellent and not wash off in rain or run due to perspiration, must be easily removable by soap and water, must not clog the pores of the skin.

The product must contain a sufficient quantity of insect repellent ingredients to afford maximum protection from mosquitoes, flies, and other injurious insects. The insect repellent ingredients must not produce an objectionable odor or any other undesirable quantity.

The cream form must be packaged in collapsible tubes of approximately 1¾ ounce capacity. The tubes must be of a non-critical material. Two tubes, one of each color, shall be packed in a snugly fitting olive drab cardboard box of strong construction, and each tube and box must be labeled with the name and color of the contents.

The stick form must be packaged in dull colored cylindrical containers of a non-critical material, the outside dimensions being approximately one inch in diameter by 3½ inches long. It must contain one stick equally divided into the two camouflage colors joined end to end, of approximately 2½ cubic inches in volume. There must be a screw type cover for one or both ends, and when closed the package must be water tight. Each container must be labeled with the name and color of the contents.

VITAMINS, HORMONES AND GRAY HAIR

By M. A. LESSER

GRAYING hair has always been a subject of much personal concern to every aging generation. However, despite the many theories that have been promulgated, it is only within the last few years that any real knowledge as to the cause of achromotrichia has been forthcoming. Even this data is still highly controversial, but enough has been accumulated to be indicative and lead perhaps to an eventual solution. Most of the present studies are concerned with members of the vitamin B complex, more particularly the so-called "filtrate factors," but there is some evidence that the endocrine system is also concerned in the picture.

Over a decade ago, biochemists observed that black haired rats became gray on a milk diet, indicating the nutritional element in achromotrichia. In the interval, other investigators[1, 2, 3, 4, 5] reported that a similar graying of the hair could be produced in mice, rats, dogs and silver foxes by feeding them a diet deficient in the "filtrate factor" of the vitamin B complex. This factor was obtained by shaking a solution of such common B vitamin sources as yeast, liver extract or rice polishings with fuller's earth to remove the thiamin, riboflavin and pyridoxine. Feeding diets deficient in the filtrate fraction resulted not only in gray, thinned patches of fur, but also in aged, wrinkled skin, ulcers, feebleness and eventually death. If administered early enough, addition of the filtrate factor caused these symptoms to regress in most instances.

Subsequent studies soon revealed that this factor was not a unit but composed of several elements; the most important, from the gray hair aspect, being pantothenic acid and para-aminobenzoic acid. Pantothenic acid was the first to claim attention. In 1940, Gyorgy, Poling and Subbarow,[6] working with purified but still crude concentrates of up to 50 per cent of pantothenic acid, observed that this substance had a definite curative effect on nutritional achromotrichia in rats. However, the fur did not become completely black in most instances and depigmentated areas often persisted.

During the same and following years, these and other investigators,[7, 8, 9, 10] using synthetic pantothenic acid and calcium pantothenate, demonstrated quite convincingly that this substance had a definite curative effect on nutritional achromotrichia in rats fed a diet deficient in this vitamin. The first change observed is in the texture of the hair, which becomes dry and brittle. It then turns brown and finally gray in a bilateral symmetrical pattern. The black coloration of the skin was likewise affected. Feeding of pantothenic acid or its calcium salt, in doses of 75 to 100 micrograms daily, resulted in definite changes back to normal color. Similar doses were capable of preventing this hair depigmentation.

More recently, in a thorough review of the effect of pantothenic acid deficiency in the rat, together with a report of their own investigations, Sullivan and Nicholls[11] of Johns Hopkins University School of Medicine confirmed that supplementing the diet with this vitamin "promoted growth and prevented and cured the generalized dermatitis and the symmetric pattern grayness."

Pertinent, too, is the work of Groody and Groody.[12] These workers found that feather depigmentation occurred in chicks fed a diet low in pantothenic acid. Feathers of a group on high pantothenic acid supplements showed little or none of this depigmentation.

However, despite this well-substantiated evidence, other investigators failed to get similar results from the administration of pantothenic acid or calcium panto-

thenate. Williams,[13] one of the leaders in the field of vitamin B investigation, found that pantothenic acid failed to exhibit a preventive or curative effect on the gray hair of rats. More recently, Frost, Moore and Dunn,[14] reported that while certain pantothenic acid-containing liver extracts cured or prevented nutritional achromotrichia in rats, the effect of synthetic calcium pantothenate was negligible.

Despite these contradictions, the news of the beneficial action of pantothenic acid and its salts could not long be withheld from a public eager for such information. Singularly enough, even with this manifest interest, the scientific literature presents no clinical studies of the value of this vitamin for human achromotrichia. However, several very indicative reports on the beneficial action of the substance on gray hair in humans have appeared in the public press. Apparently carefully done and especially indicative is the work of Punnett and Bader.[15] These investigators obtained favorable results in a large proportion of the men and women given daily supplements of 10 or 20 mg. of calcium pantothenate; the time required ranging from one to six months. Supplements of the whole vitamin B complex was also given in many cases.

Although the report of Spies and his associates[16] indicated quite clearly that pantothenic acid is essential to human nutrition, the human requirement for this vitamin has never been definitely established. In a recent article, however, Williams[17] expressed the opinion that the human requirement cannot be far from 10 mg. per day. However, as much as 100 mg. of calcium and sodium pantothenate have been administered intravenously without causing any toxic reactions.[16]

However, while investigations on pantothenic acid were being conducted, concurrent studies had begun to present evidence which indicated that this was not the only member of the B complex, or more particularly the filtrate fraction, concerned with the hair-graying phenomenon.[6, 14, 18, 19] Para-aminobenzoic acid, now frequently referred to as PABA for the sake of convenience, next began to claim considerable attention. Early in 1941, Ansbacher[20] established p-aminobenzoic acid as a vitamin and reported that it was a chromatrichia factor for the rat and a growth-promoting factor for the chick. By means of this vitamin he was able to overcome definitely apparent graying of the hair in rats, while a control group of rats not given this supplement continued to show typical achromotrichia.

Continued work on mice by Martin and Ansbacher[21, 22] gave further confirmatory evidence that para-aminobenzoic acid has anti-gray hair activity on the achromotrichia in these animals.

However, as in the case of pantothenic acid, it was not long before these observations were denied by other workers[9, 23] who found that the administration of PABA was entirely ineffective for controlling nutritionally induced achromotrichia in animals. Significantly enough however, these workers did find that pantothenic acid and calcium pantothenate were definitely beneficial in curing and preventing gray hair in laboratory animals.

Nonetheless, in spite of this lack of agreement among the several investigators regarding the role of p-aminobenzoic acid in maintaining normal pigmentation or in restoring color in animals, this vitamin has been given to human patients and definite darkening of the hair has been observed. In his first report, Sieve[24] stated that after preliminary work with B complex preparations, he decided to investigate the effect of giving p-aminobenzoic acid. Sieve reports his findings as follows: "Fifty patients varying in age from 21 to 55 years with definite achromotrichia were picked at random. In 30 cases p-aminobenzoic acid was the sole therapy and in 20 cases endocrine products in conjunction with the acid were administered. After about two months of treatment I observed in all cases a marked darkening of the hair. The recently grown shafts appeared to be normally pigmented. It is my impression that an oral dose of 100 mg. twice a day is ample to give results. The data seem to show that p-aminobenzoic acid has the same effect with respect to graying as the B complex preparation used in my earlier studies."

At the 1941 Fall meeting of the Society for Experimental Biology and Medicine held at Cornell University Medical College, Sieve and Ansbacher[25] reported that PABA had restored color to the hair of more than 300 persons of both sexes, ranging in age from 16 to 74 years. P-aminobenzoic acid tablets, each containing 100 mg., were administered orally, in doses ranging from one-half tablet twice daily to one tablet six times per day. In addition to the restoration of normal hair color, it was found that PABA also alleviated other conditions, including vitiligo (skin depigmentation). By the time his second report was published, Sieve[26] had accumulated evidence covering more than 800 cases. He had found that within three to eight weeks of treatment with this vitamin there was a noticeable return of color to gray hair.

Of course some skepticism of these findings has been voiced, in the medical literature particularly,[27, 28] but there can be no doubt that more confirmatory work must be done before a full evaluation of PABA's benefits can be ascertained. Moreover, there are certain factors which must be studied more fully before this vitamin can be permitted widespread use.

For one thing, the safety of PABA has not been fully substantiated. Despite the fact that the quantities used by Sieve are quite large as vitamin dosage goes, there is some evidence that p-aminobenzoic acid may have toxic properties. In animal studies, Scott and Robbins[29] tried the acid on mice, rats and dogs. The drug proved poisonous to mice and dogs but less toxic to rats. In dogs, oral doses greater than one gram per kilogram of the body weight may cause death with acute gastroenteritis and hemorrhages into the small

intestine. These quantities, comparatively speaking, are quite enormous. Although the human requirements for p-aminobenzoic acid is not known, there can be no question but that it will be a minute fraction of the toxic dose.

However, there is another factor to complicate the PABA picture. Evidence is accumulating which indicates quite definitely that this vitamin is capable of inhibiting the bacteriostatic action of the sulfonamide drugs and interferes with their desired action against a variety of pathogenic organisms.[30, 31, 32] This anti-sulfanilamide action is quite a complex problem and apparently several substances and mechanisms are involved.[33]

To add to the problem of wider study is the war-born scarcity of p-aminobenzoic acid. Derived from priority materials and itself a raw material for the manufacture of procaine, PABA is too important a material to be really available except for essential war uses.

In summarizing the data then available on the subject of vitamins for gray hair, an editorial in the January 24, 1942 issue of the J.A.M.A.[27] stated that "the evidence in behalf of some definite relationship between intake of vitamins and graying of hair is far more convincing for pantothenic acid than for para-aminobenzoic acid." This view, it seems, is also modified by evidence which points to a definite interrelationship between pantothenic acid and PABA. Thus, in a paper delivered last Spring before the Federation of American Societies for Experimental Biology, in Boston, Martin[34] reported further experiments on rats which indicated that the ratio of p-aminobenzoic acid to pantothenic acid is the determining factor in hair-graying of rats and possibly in humans. He reported that a ratio favoring PABA results in graying. He also stated that certain organisms stimulated to growth by p-aminobenzoic acid, destroy pantothenic acid, thus upsetting the requisite ratio.

This is somewhat in line with the findings of Pfaltz,[35] a Swiss investigator, who noted that the addition of pantothenic acid to the diet of rats deprived of this vitamin resulted in the partial restoration of color. However, she found that this coloring effect was much more marked when p-aminobenzoic acid was added to the diet.

However, it appears that these two substances are in turn interrelated with biotin and inositol, two quite interesting factors recently admitted to the vitamin B complex family. Biotin, now established as identical with vitamin "H" (the anti-egg white injury factor), may be in some way connected with the appearance of achromotrichia, according to Gyorgy and Poling.[36] In 1940, these workers reported that pantothenic acid is only one factor, though probably the most important factor, in the prevention of nutritional achromotrichia in rats and mice. Biotin, they stated, is an additional substance concerned in this hair-graying phenomenon. Moreover, it is known that in the chick, a biotin deficiency results in a dermatitis very similar to that caused by a deficiency of pantothenic acid.[37, 38] Apparently but little work has been done to fit this factor into the nutritional achromotrichia picture. The human requirements for this substance are not known, but Williams[17] estimates it to be in the neighborhood of 0.15 mg. per day.

Despite the fact that the position of inositol among the B vitamins is only tentative, it has already showed interesting potentialities not only in the field of hair pigmentation but in hair growth as such. Indeed, as a result of Woolley's[39, 40] studies and postulations, inositol is often referred to as the "mouse anti-alopecia factor." This worker found that rats maintained on a special diet required an unknown nutrient for the growth and maintenance of hair. Although the hair changes were suggestive of a pantothenic acid deficiency, a source rich in this factor failed to bring improvement. Moreover tests with biotin concentrates and p-aminobenzoic acid were likewise negative. On this basis, Woolley postulated the existence of a new vitamin.

Continued work with inositol and its derivatives resulted in complete restoration of the hair and on this basis Woolley suggested that inositol was a new factor. Later, this investigator[41] noted that the last body surface affected by pantothenic acid deficiency was also the first region involved in inositol deficiency. These results strongly indicated that both of these factors were involved in the growth and maintenance of the hair.

Pfaltz[35] also noted that inositol, as well as PABA, enhanced the pigment-restoring properties of pantothenic acid. However, it should be mentioned that Emerson and Evans[42] observed that inositol with calcium pantothenate does not significantly improve the results obtained with the pantothenate salt alone. These workers had found that calcium pantothenate stimulates growth and prevents graying, but not stippling of color, in filtrate-factor-deficient rats.

That a definite interrelationship does exist between p-aminobenzoic acid and inositol has been evidenced by the more recent investigations reported by Martin.[43] However, as stated by Elvehjem[44] in a paper published in December of last year, no work has been done on the possible significance of inositol in human nutrition.

Lack of agreement among the several investigators of the gray hair nutritional factors, together with failure to reproduce the reported results has led some workers[45] to the belief that this problem still awaits solution and made them stress the value of the B vitamins (as obtained in brewers' yeasts or liver extract) to prevent graying. Pfaltz's[35] findings indicated quite definitely that no one vitamin prevents graying of the hair and reemphasized the frequent observation that the B vitamins appear to supplement and reinforce each other. Then again one cannot help but heed Morgan's[5] warning against the danger of stressing one factor as against another.

However, graying of hair is not a simple problem to be answered on the basis of nutritional deficiencies alone. Hormones are a definite part of the picture and the relationship between the endocrines and the vitamins is being more fully appreciated. That such a possible relationship exists with regard to p-aminobenzoic acid was indicated in Sieve's[25] observation that administration of this vitamin resulted in pregnancies in a good proportion of formerly sterile women. Increased libido was also noted in several cases. He warned however, against the danger of drawing premature conclusions.

This hormone-vitamin relationship has opened up new channels of thought with regard to the problem of achromotrichia. Of course, most of the pertinent data is of very recent origin and still in its very preliminary stages. Interesting and significant in this connection is the observation made by Gerstl, Lustig and Goldfarb,[46] that sex has a definite influence on the incidence of nutritional achromotrichia in mice. Using a special diet, these students observed that within 75 days all but one of the surviving males had become gray, while 13 per cent of the surviving females showed only slight changes in color. Adding p-aminobenzoic acid or calcium pantothenate to the basal deficient diets resulted in an incidence of hair depigmentation with the same difference as first observed.

In concluding their report these workers stated that their findings imply that this achromotrichia caused by certain dietary deficiencies may depend also on hormonal factors.

The work of Forbes,[47] cited by these authors, is of pertinent interest in connection with these results. Forbes reported that a subcutaneously-implanted pellet containing estrogens (female sex hormones) produced local pigmentation of the fur in albino rats, while testosterone diproprionate failed to produce this result.

Of course it has long been known that certain endocrine disturbances can cause changes in the texture, color and distribution of hair. In hypothyroidism, for example, it is recognized that loss of hair color or even baldness may occur in some persons and that such changes can largely be checked by administration of thyroid preparations.[48]

However, the recent scientific literature indicates a trend toward deeper delving into the relationship between hair and feather color and hormones. This work, too, is in its very early stages, although Willier[49] cites the work of Lillie and his associates, who in 1932 were able to profoundly affect the pigmentation pattern of roosters by injecting thyroxin. These workers also showed that injections of sex hormones may also modify feather color patterns of fowls.

More recently Hamilton[50] has studied the action of sex hormones and desoxycorticosterone (adrenal hormone) on the differentiation of feather melanophores (pigment cells) in plasma clots *in vitro*. He found that these hormones had definite effects on pigmentation.

Summarizing these investigations, Willier, of Johns Hopkins University, observed that, "These experiments show that melanophores have the capacity to respond to hormones and thus furnish a basis for understanding the role of hormones in feather pigmentation."

Obviously this is not of much value in the treatment of gray hair in humans, but since there is a definite relationship between hair and feather pigmentation, it is at least a beginning to the study of a perplexing question.

Of course factors other than vitamins and hormones are concerned in the occurrence of gray hair. For example, there is some evidence that minerals, including iron, copper and manganese, have a role in nutritional achromotrichia,[51] but these and other possible causal elements cannot be discussed here. However, from the foregoing it should be quite evident that there is a good deal more to be learned about achromotrichia. What has already been learned is but a good beginning and applies largely to animals. Whether this information can be employed for the retention or restoration of pigment in human hair still awaits further confirmation.

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THE STRANGE ODYSSEY OF TEN TONS OF OAKMOSS

By EDWARD SAGARIN*

THIS is a story of oakmoss, of ten tons of genuine Jugoslav oakmoss. It is a story that Jules Verne might have called, "Around the World in Eighty Weeks," and it is around a world of spreading war that the treasured cargo travelled.

Let us go back to the Autumn days of 1940. France had fallen, Mussolini had entered the war in the hope of being present at the knockout blow, England had withstood the most furious air attack in history, and the fighting men of that brave lone island were enjoying an interlude between battles. It was a short time before Lease Lend, and a long time before Pearl Harbor. People were asking themselves where the German Juggernaut would strike next, and many thought the Balkan states would be victims of the Nazi fury.

Evaluating this uncertain situation, Givaudan-Delawanna negotiated for the purchase of ten tons of Jugoslav oakmoss, to be shipped f.o.b. Piraeus, which our political geographers may remember to be the port of Athens, Greece.

There was an exchange of many cables, in which we urged that the material be gotten aboard a ship as quickly as possible. Murmurings were heard of Italian demands upon Greece. On the morning of October 27, 1940, Italian troops stationed in the occupied land of Albania were given the order to march on the classical birthplace of democracy.

An electrified world watched the Fascist troops, having had some initial successes, pushed back, out of Greek territory, into the hostile land of the Albanians. An Albanian seaport on the Adriatic fell into the hands of the advancing Greeks; a port that had been named for the daughter of Mussolini resounded with the cry: *Death to Fascism.*

For an entire Winter the Greeks advanced, inch by inch. The neighboring Balkan lands watched, fearful of the Germans who soon must come to the aid of Duce's defeated army. Such was the background against which ten tons of oakmoss lay in Jugoslavia.

"Bring the oakmoss to Switzerland and extract the resin," we pleaded with our Swiss associates. "Send it across Europe and then to America in a Spanish boat, or to Genoa and then across the Atlantic in a Swiss boat." And all our pleas were resolved into one desire, that our cargo leave the Balkans, momentary hot spot of a world aflame.

In December 1940 we were informed that the ten tons of oakmoss were "on the verge of leaving Zagreb, Jugoslavia." At the end of January the proper clearance papers from the British authorities had not yet been granted; in February no news arrived, and the much feared European Spring was approaching. Then a short cable informed us: "MOUSSE DE CHENE LEFT SUSAK VIA BASRAH."

Susak was a Jugoslav port. Basrah was a place-name that sent us scurrying to the maps; finally, we located it on the Persian Gulf, far out of the danger zone.

The cable informing us that our oakmoss was en route arrived on March sixth. Indeed, the oakmoss had slipped out just in the nick of time. Three weeks later the Jugoslavs rose against the government that would turn them over to the Nazis; and another week later the German armies were given the order to crush these courageous people who had upset Hitler's timetable.

But our cargo had already left the land of the brave Serba to be carried across the land route made famous by the Orient Express. In Belgrade, it may have missed bombs by a matter of hours; from there it crossed to Bulgaria, went in and out of Sofia, and arrived in Istanbul. Here new financial transactions arose, letters of credit, guarantees, insurance difficulties, cables by the dozen. A route was envisaged from Istanbul to Baghdad, a journey part by rail, part by truck.

In May 1940, we learned that the oakmoss was in Baghdad, on the way to Basrah, and we heaved a sigh of relief,—but not for long. A German-instigated *coup d' etat* made Baghdad the capital of a new theater of war, the struggle for Iraq. There was never any doubt as to the outcome of this skirmish, but indeed there was doubt as to what would happen to our peripatetic cargo while warehoused in Iraq.

But the Nazi "tourists" and their Allies were more interested in the struggle for power than for oakmoss, and when the short-lived battle had subsided and order

*Givaudan-Delawanna, Inc.

had been restored—(note that Iraq is now one of the United Nations)—we learned that our precious lichens were safe and sound.

Our oakmoss next crops up in Basrah, where the papers are cleared for shipment, but shipping space is scarce. Conferences ensue between our representatives, shipping men and consular officials, with ceaseless efforts being made to have the cargo shipped, until finally space is found, and on the historic waters of the Persian Gulf and the Gulf of Oman the boat sails, landing in Karachi, a port on the Western coast of India.

In Karachi, our 129 packages of moss were removed by the British authorities, for reasons that are still beyond us, and for a while it looked as if the journey had come to an abrupt termination. Again there are innumerable conferences, papers to be cleared, transactions, cables, certifications, delays, doubts, until finally, on the 15th of October 1941, fully a year after the purchase had originally been made in Jugoslavia, we learn that the British have released the cargo. Not long after, shipping space is obtained. In the Givaudan laboratory, there were no bounds to the joy of the perfumers who could count the days until oakmoss would once again be abundant.

Our journey takes us on an American boat through the Arabian sea and out into the Indian Ocean. The ship steamed out of the Pacific area just before Pearl Harbor, just in time to escape the fury of the Far Eastern war. Around the Cape of Good Hope, out into the South Atlantic, dodging submarines, joining convoys. Then word came that the boat carrying our valued cargo would land at Boston, where some merchandise would be taken off, and from there it would proceed to New York. *Our valued cargo, indeed!* For not only was oakmoss completely irreplaceable, but its value had skyrocketed to several times the original purchase price.

While the writer made arrangements to have pictures taken of the bales of oakmoss being removed from the ship, Givaudan's representatives suggested that the moss be removed at Boston and brought down to New York by rail—just to be on the safe side. But shipping papers gave New York as the port of debarkation, and the authorities would not permit the change to be made.

The vessel came to Boston and left, and was out but a short time when ship and cargo went down—not at the hands of an enemy U-boat, but as a result of hitting the rocks in the darkness. There was no loss of life.

So close to shore was the sunken boat that for many weeks divers went down, examining the cargo, and bringing up with them much that had been given up for lost. And as we watched the progress of these undersea swimmers, we kept our hopeful spirits high, until the day came when nothing else could be salvaged, nothing more could be brought to the surface, and underwriters and Navy officials alike declared the remaining cargo to be lost. Thus ends the modern odyssey of the oakmoss.

Many a more important cargo has sunk in this war, but few have gone through so many perils, leading into so many scenes of warfare. Few have escaped so many real dangers, only to be lost within sight of destination.

Some will find a symbol in this story of irony. They will see in it a parable about millions of homeless, driven from their lands by the onrush of tanks and the terror of crashing bombs, chased into every corner of the earth, reaching out, undismayed, for an asylum in America.

To others, our oakmoss is a symbol of the more beautiful cultural and artistic values which pre-Hitler Europe contributed to our world; they will find it symbolic of a beauty that cannot rise again until the world is free of tyranny; they will say that this is not the moment in history that can belong to the fragrant scents which have inspired the great poets and artists and lovers down through the ages.

SOLUBLE SODIUM PERBORATE

A soluble sodium perborate compound, which releases its oxygen with much greater rapidity than ordinary flavored perborates, and which has a much lower pH than other perborate preparations is the subject of U. S. Patent No. 2,275,979, granted March 10, 1942 to Nicholas M. Molnar, New York.

According to the patent, a two per cent. solution of sodium perborate monohydrated has a pH of 10.0, releases no oxygen in up to 10 minutes, and practically none of the perborate is dissolved. A two per cent. solution of sodium perborate tetrahydrated has a pH of 10.0, releases 0.2 cc. of oxygen per 2 grams in 10 minutes, and practically none of the perborate is dissolved. However, a two per cent. solution of a mixture of 39 grams of sodium chloride, 3 grams of potassium iodide, 38 grams of sodium perborate monohydrated, and 20 grams of citric acid, has a pH of 8.8, releases 12.0 cc. of oxygen per 2 grams in 5 minutes, and 19.0 cc. of oxygen per 2 grams in 10 minutes, and is almost all dissolved.

Five other mixtures are given in the patent, one of 20 grams of sodium chloride, 3 grams of potassium iodide, 39 grams of sodium bicarbonate, 38 grams of sodium perborate monohydrated; another of 30 grams of sodium chloride, 1 gram of potassium iodide, 69 grams of sodium perborate monohydrated; a third of 20 grams of sodium chloride, 2 grams of potassium iodide, 28 grams of sodium bicarbonate, 50 grams of sodium perborate monohydrated; a fourth of 42 grams of sodium chloride, 39 grams of sodium perborate monohydrated, 19 grams of citric acid; and a fifth of 3 grams of potassium iodide, 40 grams of sodium bicarbonate, 57 grams of sodium perborate monohydrated. The pH of these mixtures varies from 8.2 to 9.6; the amount of oxygen released by two grams in a two per cent. solution in five minutes varies from 1.3 cc. to 9.0 cc.; the amount of oxygen released in two minutes varies from 1.0 cc. to 14.0 cc.

By varying the mixture, the patent claims, the pH can be varied between 7 and 9.4, with the potassium iodide not exceeding 3 per cent. of the preparation.

The patent is available for license to reputable manufacturers.

AMMONIATED MERCURY AND THE SKIN

By D. F. NEALON
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For many years the medical profession has used and recommended mercury salts for the treatment of various skin conditions among which are acne, blackheads and freckles. As a result of the extensive medical use, a number of cosmetics containing white precipitate (ammoniated mercury) have been introduced for the purpose of bleaching and otherwise improving the general appearance of the skin, especially that of the face. A review of this subject showed us that in spite of an enormous wealth of practical experience, no direct experimental records based on purely objective findings were discoverable. We set ourselves the task of trying to prepare such records.

As permanent records were necessary, some form of photographic approach seemed imperative. However, photography in itself is a complex of variables. When simply applied to the human face it becomes unmanageable as a scientific record, because the psychological reactions of the observer to the subject often outweigh a question of light and shade. We have therefore confined this record to a definite area of the skin, and we have made the comparison under conditions designed to eliminate any such error. Clearly, all photographic studies must be conducted under conditions in which every possible factor is kept the same, so that the quantity of variables is reduced to a number capable of analysis. Without going into detail, we may state that all such factors were rigidly controlled. These include illumination with voltage control, time of exposure, aperture, firmly fixed stands for camera and subject, light proof studio, etc.

In spite of all of our efforts it was at first found impossible to duplicate *with certainty* any given density of negative or print. Color photography was even worse than black and white. Therefore, in order to prevent misinterpretation of results, especially that due to "wishful thinking" we added standards of known reflectance value to the skin area to be photographed at the same time. In this way, all results are based on fixed standards. When measured by means of the photoelectric cell the effects of changes of photographic density which may occur from time to time are eliminated.

Two series of photographs were made of each subject. One designed for measurement of skin color which we call our Relative Color Density Photographs. The other series is composed of full face photographs to show the all over effect.

The relative color density photographs were made on the apparatus shown in Figure 1.

Fig. 1—Apparatus Used For Taking Relative Color Density Photographs

*Originally presented before the Division of Medicinal Chemistry of the American Chemical Society at Buffalo, New York, September 1942.

The control disk is composed of neutral gray shades of known reflectance value, prepared and standardized by the Munsell Color Company.[1] The segments range from Actual Black, Munsell Value 1.30 to Actual White, Munsell Value 9.55.

The subject stood behind the disk and placed her cheek against the hole in the center. This allowed approximately 15 per cent. of that side of her face to be photographed. We selected a flat area and then lowered a brace onto her head in the back. This brace has a graduated scale which helped us return to the same area for future photographs. It also helped the subject to hold the cheek flat against the hole. Undue pressure would cause a bulge and create highlights, and would also produce changes in the color of the skin due to changes in local blood supply. Unless carefully controlled these changes can become a serious source of experimental error. The apparatus and camera were firmly fixed, the illumination being from equal distances and at an angle of 45°. The light intensity at the center of the disk was measured each day and maintained the same. Voltage was controlled at 108 volts. Each reflector contained a No. 1 photoflood bulb. Four photographs of the right and left cheeks of each subject were taken, one at the start, and one at two week intervals for six weeks. See Figure 2.

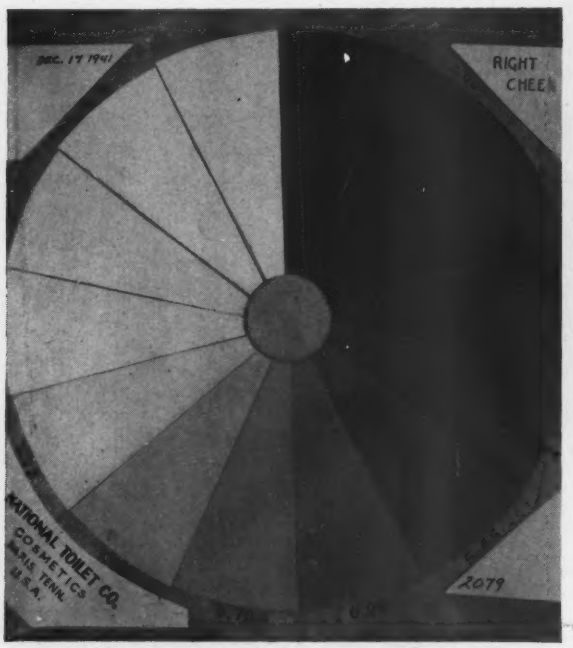


Fig. 2—Print Obtained Using Apparatus Shown in Figure 1

These prints were then measured on a reflectometer under uniform controlled voltage. The skin area was placed at the aperture and the reflected light was measured in foot candles. Then the two control areas immediately darker and lighter were measured in the same way.

[1]Nickerson, Dorothy: History of the Munsell Color System and its Scientific Application, Volume 30, Number 12, Journal of the Optical Society of America.

This is a specimen measurement:

Control segment 6.70 measures 45 foot candles
Control segment 6.05 measures 40 foot candles
The skin ? measures 42 foot candles

A variation of 5 foot candles equals 0.65 Munsell value. One foot candle equals 0.13 Munsell value. The skin, which is 2 foot candles or 0.26 Munsell value lighter than control segment 6.05 Munsell value measured 6.31 Munsell value on this date. Comparison of the measured Munsell value of the skin areas at the start and finish of the experiment indicates if the skin is becoming lighter or darker.

The full face photographs were taken on the apparatus shown in Figure 3.

Fig. 3—Apparatus Used For Taking Full Face Photographs

Here again all conditions were rigidly controlled. The disk above the subject's forehead had a measured reflectance of Munsell value 6.70. By using it we were able to obtain start and finish prints of the same density. See Figure 4. We made several prints of each of the four photographs taken during the experiment. We measured the control area on prints of each date until we obtained four, one for each date, that measured the same. We then had a series of photographs that were of the same density and any change observed in skin color was not due to "wishful thinking."

In this experiment we used 18 female subjects, aged from 18 to 35 years. They were divided into two groups

of 9 each. The test group used a cosmetic ointment containing 3% ammoniated mercury and small percentages of bismuth subnitrate and zinc oxide. It was applied to their faces one-half hour daily for six weeks. Application was made in our laboratory after washing the face with soap and water. At the end of the half-hour the cream was removed with soap and water. The control group simply washed their faces twice a day with the same brand of soap. They did not apply any cream or ointment. Table 1 shows results obtained in the test and control groups.

TABLE I—COMPARISON OF LIGHTENING EFFECTS EXPRESSED IN MUNSELL VALUE

	Test Subjects		
Experiment No.	**Left**	**Right**	**Average**
2081	+.05 M.V.	+.17 M.V.	+.11 M.V.
2082	+.24 M.V.	+.26 M.V.	+.25 M.V.
2083	+.12 M.V.	+.25 M.V.	+.185 M.V.
2084	+.52 M.V.	+.49 M.V.	+.505 M.V.
2085	+.16 M.V.	+.24 M.V.	+.20 M.V.
2086	+.28 M.V.	+.16 M.V.	+.22 M.V.
2087	+.36 M.V.	+.28 M.V.	+.32 M.V.
2088	+.22 M.V.	+.24 M.V.	+.23 M.V.
2089	+.33 M.V.	+.28 M.V.	+.305 M.V.
Average	+.24 M.V.	+.26 M.V.	+.26 M.V.

	Control Subjects		
2071	-.02 M.V.	+.06 M.V.	+.02 M.V.
2072	+.05 M.V.	+.04 M.V.	+.045 M.V.
2073	.00 M.V.	.00 M.V.	.00 M.V.
2074	+.14 M.V.	.00 M.V.	+.07 M.V.
2075	+.04 M.V.	+.02 M.V.	+.03 M.V.
2076	+.10 M.V.	.00 M.V.	+.05 M.V.
2077	+.17 M.V.	.00 M.V.	+.085 M.V.
2078	.00 M.V.	+.02 M.V.	+.01 M.V.
2079	+.06 M.V.	+.04 M.V.	+.05 M.V.
Average	+.06 M.V.	+.02 M.V.	+.04 M.V.

Test Subjects Lightened .26 M.V.
Control Subjects Lightened .04 M.V.
Net Lightening due to use of 3% Hg Cream .22 M.V. or 2.67%.

Our average results as measured by the relative color density photographs show a definite lightening of both groups. The control group lightened 0.04 Munsell value or 0.48% which is due to the season. The test group lightened 0.26 Munsell value of 3.15%. They would have had the same seasonal results as the control group. So we may say that the use of this cosmetic ointment has lightened the skin 0.22 Munsell value or 2.67%. The above percentages are based on the difference between actual black 1.30 M.V., and actual white 9.55 M.V.

This change, although not large in percentage in relation to black and white, makes a considerable difference

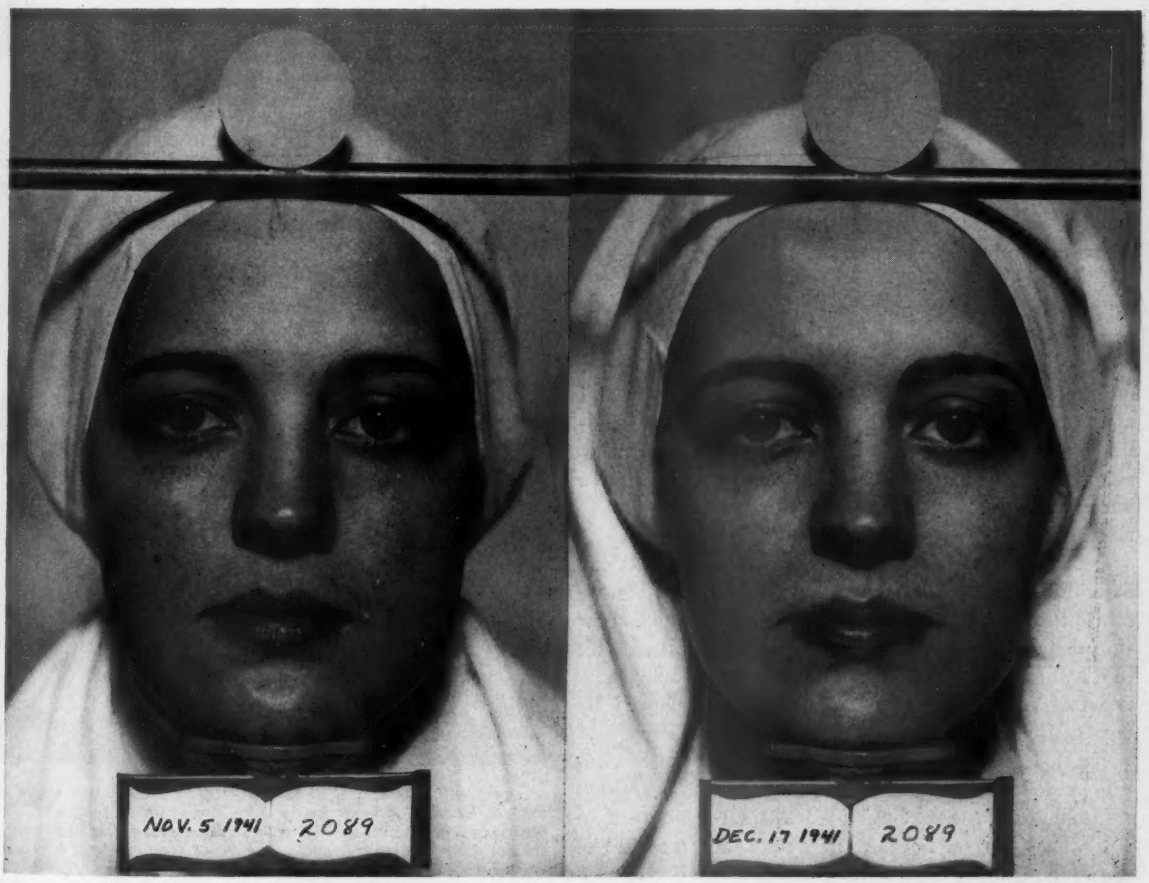


Fig. 4—Prints of Same Density Showing Visual Effect of 15.71% Lightening

in human appearance. This is illustrated by the easily observed change in summer and winter complexion. In order to make a more accurate comparison of the lightening effects we compared them with the actual range of white human skin color. Of 65 white subjects measured in the course of our experiments, the whitest skin found was 7.35 M.V., and the darkest skin was 5.95 M.V. The difference or range of color density is 1.40 M.V. If we apply our net lightening effect of 0.22 Munsell value to this actual measured range of skin color, we obtain a lightening of 15.71%. This is more in keeping with the visual effect as shown by Figure 4.

In this figure the photograph taken on November 5th, at the start of the test and the photograph taken on December 17th, at the end of the test, are of the same density. Both control areas just above the subject's forehead measure the same on the reflectometer.

Conclusion:

1. A method of recording and measuring changes in reflection of light from human skin has been described.
2. Normal variations in skin color have been observed.
3. A cosmetic ointment containing 3% Ammoniated Mercury, when applied to the skin one-half hour daily for six weeks lightened the skin .22 Munsell value or 15.71% of the observed white human range.

VITAMINS AND DEFICIENCIES

Recent reports from a meeting on "The Signs and Symptoms of Deficiency Diseases" held by the Scottish group of the Nutrition Society at Gleneagles, Perthshire, should be of real interest to those interested in vitamins.

Professor V. P. Sydenstricker, U. S. A., described clinical patterns of vitamin B deficiency. Vague malaise, weakness, lassitude, nervous irritability, mild depression, muscle pains, anorexia and consciousness of disturbances of gastro-intestinal motility are early symptoms. All symptoms resulting from dysfunction or degenerative changes of the peripheral nerves and heart are attributed to thiamin deficiency. Certain dermatoses and lesions of the mucous membranes and symptoms referable to the cerebral cortex and midbrain are thought to be due to depletion of nicotinic acid. Other changes in the skin and mucosae and a variety of disorders of the visual apparatus respond to riboflavin.

Dr. John Yudkin, Cambridge, pointed out that the available tests could be divided into those which demonstrate the existence of deficiency and those which show that deficiency is the cause of the condition. The stages in diagnosis: Indirect and direct evidence of deficiency, presence of signs expected in deficiency, followed by cure of the condition by correction of the deficiency.

Dr. J. R. Mutch, Aberdeen, gave an account of vitamin A deficiency with relation to the eyes. Although vitamin A appears to be related to the regeneration of the visual purple, neither the extent nor the rate of dark adaptation bore any close relationship to the vitamin A content of the diet. Wartime restrictions on diet has not caused any increase in the amount of night blindness, while chronic blepharoconjunctivitis and corneal ulceration have decreased in frequency. However, there has been an increase in the number of infants showing severe photophobia, a condition which rapidly clears up on improvement of feeding and treatment with cod liver oil and ultra-violet light.

Dr. J. Gerrie, Aberdeen, described the value of vitamin A in nasal sinusitis of children, a condition which is increasing. The older treatment of weekly antral lavage is unsatisfactory because in sixty per cent. of the cases suppuration recurs after being cleared up. Vitamin A, given to cases with suppuration, did not influence the infective process, but was highly effective in the pre-suppurative stage. A number of non-suppurative cases in which typical thickening of the antral lining was confirmed by X-ray, were given vitamin by mouth or by intramuscular injection, and after one to six months only about twenty per cent. showed suppuration, while eighty per cent. of a group of similar control cases, treated without vitamin A, went on to suppuration.

Professor Noah Morris, Glasgow, said that the classical type of rickets, with its marked skeletal deformities, has almost disappeared, but has left a form of the disease which is more dangerous because it is not obvious. Formerly, early signs of rickets appeared about the fifth month, but now it is known that rickets may occur in the foetus if the mother is suffering from calcium and vitamin D starvation. While osteomalacia is most commonly associated with pregnancy and lactation, it may also occur where there is insufficient intake or poor absorption of lime. The non-pregnancy type may involve the spine alone and be diagnosed as rheumatism.

Dr. A. Lyall, Aberdeen, speaking on Calcium and Phosphorus Deficiency and Hoproteinaemia, pointed out that primary nutritional disturbances of these types are rare. Nutritional hypoproteinaemia is infrequent, but may be associated with anorexia or pregnancy, and sometimes with imbalance of chloride and fluid.

Saraka will soon appear in its new wartime dress shown above at the left. Because of the necessity of conserving metals, the package at the right will disappear. The new package is of cardboard with a special protective inner coating. The new package is more attractive and gives greater shelf visibility. First the introductory size will appear in the new style, and after a few months both packages will be in use.

ANTIPERSPIRANTS

The second major division of products intended for combatting perspiration is the group of antiperspirant preparations, the first being deodorants. Although the latter group is supposed to work by absorbing, masking, or neutralizing odors of perspiration, antiperspirants attack the problem at its source by stopping the flow of perspiration. This they do wholly through their astringent action.

Astringency is a function dependent upon the power to precipitate proteins. Thus, the addition of tannic acid, alum, or one of the other astringent chemicals to a protein solution, at the proper pH, will result in the formation of a precipitate. This same action takes place when astringents are applied to the skin surface. Cell contents are changed in character to a sufficient extent to create slight local swelling. This in turn closes the external openings of the sweat glands, for the most part temporarily, and chokes off the excretion of perspiration. Normal body processes dispel this astringent effect in time. In rare instances, cell swelling from the action of astringents leads to inflammation or irritation; for the most part, the process is harmless. Furthermore, the heat dispelling activity of the skin surface, depending upon secretion of perspiration, is not affected by the localized retarding of sweating, since additional activity at other locations results.

A number of compounds exhibit astringency. These include alcohol, ferric salts, formaldehyde tannins, zinc compounds, aluminum compounds, etc. Not all, however, may be safely used; zinc chloride, for example, is caustic and may cause skin injury. Ferric salts cause discoloration; formaldehyde, unless used carefully, is too vigorous a precipitant and has an unpleasant odor. Actually, almost all present antiperspirants are based upon the astringent action of aluminum compounds.

Aluminum chloride, aluminum sulfate, and alum are the most commonly used aluminum salts. At times other aluminum salts, such as the acetate, citrate, acetotartrate, sulfocarbolate, have been suggested for this purpose, but have not found favor. The acetate and acetotartrate have an odor of acetic acid that is extremely difficult to cover. The citrate apparently forms a complexion that has little if any astringent action; the sulfocarbolate is quite expensive.

Aluminum chloride is highly satisfactory, with one important drawback, as an antiperspirant chemical. It is easily and quickly soluble in water, forms a clear, stable solution, is quite inexpensive, and highly effective as an astringent. The same is true of aluminum sulfate. Alum, which is a double salt of aluminum and potassium sulfates, is far too often recommended for use in deodorants and antiperspirants. It has the virtues of the aluminum chloride and sulfate, it is true, but its use involves the unnecessary addition of a completely inert salt, potassium sulfate, to the preparation. Potassium sulfate is neither good nor bad; it is merely useless. In formulas calling for alum, an equivalent weight of aluminum sulfate may always be substituted. For every 474 parts of potash alum, 333 parts of aluminum sulfate may be substituted to obtain the same proportion of active aluminum compound.

The drawback in the use of aluminum chloride and sulfate is connected with the hydrolysis of these compounds. In solution, each of them produces substantial proportions of a strong mineral acid, either hydrochloric or sulfuric acid. These react with textile materials to produce tendering or weakening of the fabric. After relatively few launderings and ironings, the weakened fabric disintegrates. Aluminum salts of weak organic acids do not have this effect, since the acid produced by hydrolysis is weak and without effect on fabrics. Unfortunately, as was previously mentioned, these salts have disqualifying properties preventing their adoption.

It is possible, however, to reduce the acidity of aluminum chloride and sulfate by the addition of buffering compounds. The use of borax has long been advocated to prevent precipitation from aluminum salt solutions. A small amount of this compound will combine with acid released by hydrolysis from the aluminum compound so that an equilibrium state between aluminum chloride (or sulfate) and aluminum borate will be set up. So-

dium sulfocarbolate, less expensive than aluminum sulfocarbolate, can be used in the same way.

Thus, to prepare an antiperspirant solution, about 20 per cent. of aluminum chloride is dissolved in water with the addition of from one-half to one per cent. of borax or one to two per cent. of sodium sulfocarbolate. Dye used for coloring should not only be stable to light, but must also be stable to acid and aluminum compounds.

The formulation of antiperspirant creams requires the same attention to buffering that solutions need. Buffering here serves two purposes, however. Not only must the release of strong acids be inhibited to prevent action on fabrics, but the acid emulsifying agent must also be protected from this action. In addition, larger quantities of buffers, which might cause undesirable precipitation of aluminum hydroxide in solution, are quite acceptable in creams where the aluminum hydroxide is an active astringent. In fact, one antiperspirant on the market consists wholly of aluminum hydroxide.

The antiperspirant cream requires the same type of formulation as an acid cream, with additional care because of the precipitating power of aluminum salts. Water-in-oil creams based on absorption bases offer few problems, but the vanishing type cream, which is greaseless, is far more popular. Glyceryl monostearate is the most generally useful base. The emulsifying agent used may be almost any synthetic detergent or emulsifier that is found satisfactory, as long as the emulsifier is active both at a low pH and in the presence of aluminum compounds. Buffer to the extent of about 50 per cent. of the aluminum sulfate used is added to smother the mineral acid effect. Urea has been most successfully used as a buffer, and the patent covering its cosmetic use has recently been declared invalid.

As a typical procedure, a cream is first made with glyceryl monostearate, emulsifier, and about half the water required in the final product. The aluminum salt and the buffer are mixed with the rest of the water and slowly stirred into the cream.

PROPRIETARY TOILET GOODS

The Toilet Goods Association has appointed a special committee to work on problems of particular interest to manufacturers of what the association calls "Proprietary Toilet Goods" as distinct from Cosmetics. These products include tooth pastes, tooth powders, all other dentifrices, shaving creams, and hair preparations.

The chairman of the committee is John S. Norton, of the Lambert Pharmacal Company, St. Louis, and the other members of the committee are: William M. Bristol, Bristol-Myers Company, Hillside, N. J.; F. S. Dieterich, The Mennen Company, Newark, N. J.; Edgar F. Hoefer, Lucky Tiger Manufacturing Company, Kansas City, Mo.; E. B. Hurlburt, The J. B. Williams Company, Glastonbury, Conn.; A. E. Johnson, Colgate-Palmolive-Peet Company, Jersey City; H. J. Lehman, The Wildroot Company, Buffalo; M. Michelin, Pinaud, Inc., New York; Arthur B. Richardson, The Cheesebrough Manufacturing Company, New York; Ralph B. Semler, R. B. Semler Company, New Canaan, Conn.; S. L. Mayham, Executive Secretary, The Toilet Goods Association.

The Committee held its first meeting February 4 in New York and work has already been started on a number of matters importantly affecting this class of products.

TIN SALVAGE FIGURES

The Tin Salvage Institute, Hillside, N. J., reports that more than 2,300,000 pounds, gross shipping weight, of collapsible tubes were received for reclamation between April 1, 1942, and January 1, 1943. The WPB order requiring the return of an empty tube for the purchase of new goods went into effect April 1, 1942. Of the gross shipping weight, more than 680,000 pounds of tin have so far been recovered and made available for use. The remainder is in the process of reclamation.

More recent figures indicate that the tubes are flowing in at the rate of hundreds of thousands of pounds per month, nearly 400,000 pounds being received in December alone. In addition to the tin that is being recovered, a sizable quantity of lead and aluminum is also being added to the nation's stockpile.

MEDICAL AND DRUG CONFERENCE

Leaders in the medical profession and the pharmaceutical manufacturing industry are to hold a conference on war and post war medical problems on March 15, at the Waldorf-Astoria Hotel, New York. The conference will be held under the sponsorship of the Findlay Institute of the Americas, which is a permanent memorial foundation honoring the late Dr. Carlos Findlay. Basil O'Connor, of New York, well known as the head of the National Foundation for Infantile Paralysis, is the head of the Findlay Institute.

John G. Searle, President of the American Drug Manufacturers Association, and Morris Fishbein, Editor of the "Journal of the American Medical Association," are heading committees who are currently working out programs for the morning, afternoon and banquet sessions. S. B. Penick, of S. B. Penick & Company, New York, is Vice-chairman of the general committee on arrangements.

Invitations will be issued a select group of leaders in the medical profession and the pharmaceutical manufacturing industry asking them to attend the conference. Since the provision of medical service has become a wartime problem, the long range prospect is that it may become a part of government planning in the post war world. Planning is already being discussed along this line in England, but this conference will be the first major approach to the problem in this country on the part of these two groups.

AUSTRALIAN DRUG MANUFACTURE

DUE to difficulty of obtaining supplies from abroad, Australia has been forced to establish its own manufacture of drugs and medicinal chemicals. Reports from the land "down under" last month indicated that remarkable progress is being made.

Phenacetin will soon be available from local raw materials. Colocynth is found in Queensland and the next crop will be harvested. Phenophthalein will soon be available from local raw materials.

Magnesium Carbonate is made locally, as is Magnesium Trisilicate of excellent quality. Aluminum Gels are available. Kaolin of local manufacture has been high in siliceous matter, but a method to produce a high quality is expected to be in operation soon. Sodium Bicarbonate is produced locally.

Calx chlorinate, Phenol and Proflavine are being produced in large quantities. Proflavine is particularly important as it can entirely replace acriflavine which was imported. Cresol is being chlorinated in a large scale plant to produce Chlorocresol. Silver proteinates are being made in large quantity. Potassium permanganate and Eugenol are being made, but in quantities insufficient to meet all needs.

Zinc sulfate and Alum are being produced from local materials. Digitalis of high quality is being produced in Victoria, with a surplus for export. Caffeine, Caffeine Citrate and Theobromine, formerly from Holland, are made locally. Processes for manufacture of Nikethamide have been developed and production can be started when required.

Peppermint Oil and Fennel Oil are being distilled in N.S.W., and Oil of Ginger will be available from the Queensland crop at an early date.

Sulfanilamide and Sulfaguanadine are being made from local materials. Atropine is being extracted from the native duboisias, and adequate amounts will soon be available. Belladonna is grown in small amounts in Victoria. Barium sulfate of X-ray quality is available in large quantities from local makers.

Experimental work on Ergot of Rye indicates that large yields of this product can be obtained with an active alkaloid content much higher than that of the best Spanish variety.

Salicylic Acid is produced locally, and Sodium Salicylate will shortly be in production.

Production of Morphia direct from poppy hay is looked upon as a triumph for Australian research workers. Under the new process the tedious method of obtaining opium from incised poppy capsules has been eliminated. An Australian firm is making Morphia from poppies grown under the direction of C.S.I.R., which had to overcome problems associated with the selection of strains of poppy most suitable for cultivation in Australia. Hyoscine is being prepared from native duboisias, and supplies are being exported to allied countries. Chloral Hydrate and Chlorbutal are being made in adequate quantities, and a plant is being erected for production of paraldehyde. One firm has undertaken production of Phenobarbital.

Ascorbic Acid is being produced in considerable quantities in a large-scale plant. Nicotinic Acid has been synthesized by at least two firms. Varieties of locally caught sharks are giving liver oils high in vitamin A, but these must be reinforced with vitamin D.

PATENT VIEWS

Regarding the patent system of this country, the National Association of Manufacturers recently stated some views of American industry on this subject. The principal point in these views is the statement of Mr. Justice Douglas of the U. S. Supreme Court that declares that a new device, in order to be patentable, "must reveal the flash of creative genius." Want a false viewpoint this is. Chemical manufacturers, as well as manufacturers in other industries, know that many patents are the result of many years of painstaking research. Chemical processes toward a desired end are more often than not the result of the difficult road of trial and error. Chemists and chemical engineers know that it should be possible to produce a certain product by a known basic method, but the actual steps cannot be determined except by long laborious experimenting. To think that citric acid was produced by fermentation of sugar as the result of "the flash of genius" indicates complete lack of information regarding this important development.

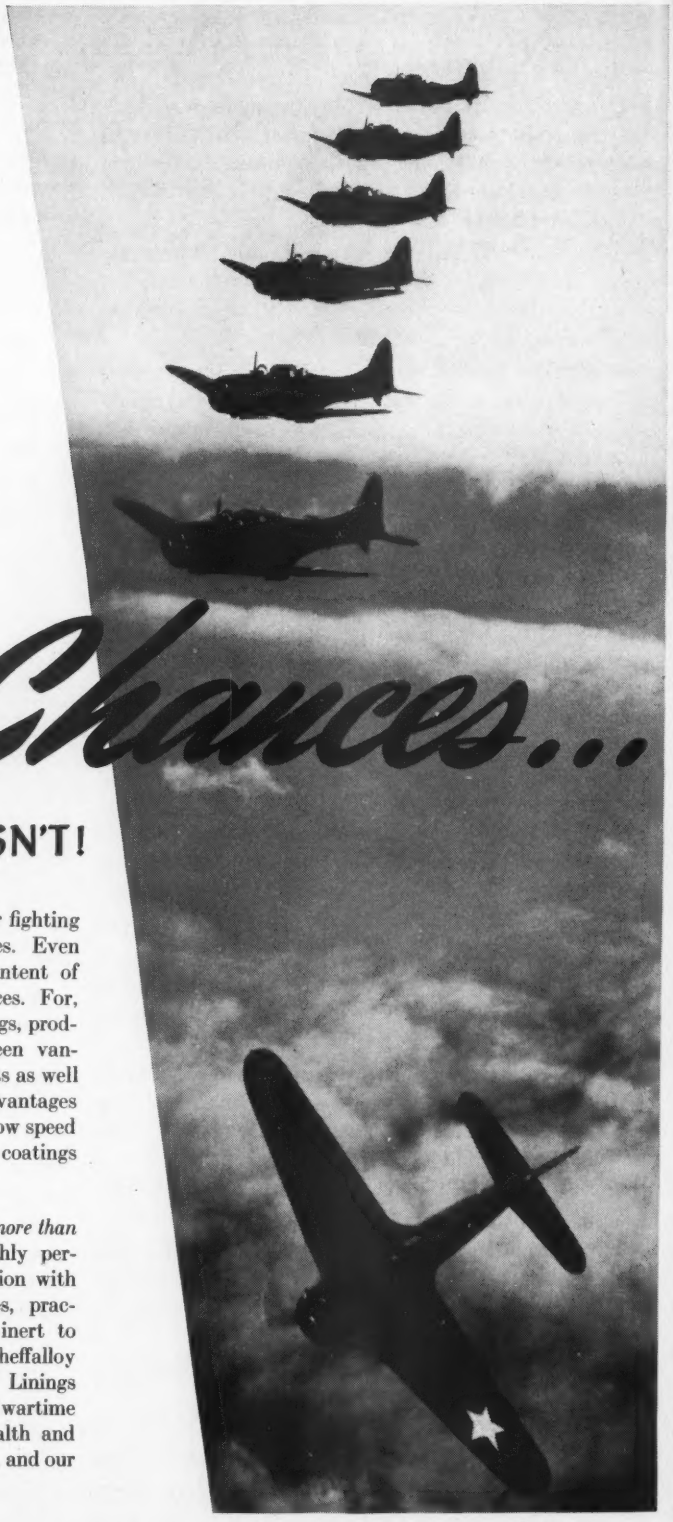
Rather did the Supreme Court, speaking through Mr. Justice Story early in the history of our patent system, set forth certain fundamental principles which still apply. These principles were:

"It is of no consequence whether the thing be simple or complicated; whether it be by accident, or by long, laborious thought, or by instantaneous flash of the mind, that it is first done. The law looks to the fact, and not to the process by which it is accomplished. It gives the first inventor or discoverer of the thing the exclusive right, and asks nothing as to the mode or extent of the application of his genius to conceive or execute it."

The N. A. M. is opposed to cartels as such, but it "approves in principle the recording of agreements, particularly international agreements, pertaining to patents or the filing thereof with the Patent Office where such instruments contain certain restrictive provisions or involve cross-licensing under patents or the pooling of patents." The association is also opposed to compulsory licensing of patents "on the ground that it would discourage inventors and research scientists from searching for new products and processes, and discourage investors from investing funds in the costly development of new ideas."

JOT THIS MEMO ON YOUR CALENDAR!
Attend 18th Annual Drug, Chemical & Allied Trades Dinner at Waldorf-Astoria Hotel, New York
THURSDAY — MARCH 4th — 1943

DIVE BOMBER peeling off for attack. OFFICIAL U. S. NAVY PHOTOGRAPH.



THEY HAVE TO *Take Chances...*

YOUR PRODUCT DOESN'T!

RISK is the inevitable result of war. With our fighting forces, it's part of their job to take chances. Even though war has affected the type of metal content of tubes, New England tube users do not take chances. For, with the coming of our VINICOTE Interior Linings, product discoloration, corrosion and creep have been vanquished! Even strongly acid and alkaline products as well as many medicinal preparations long denied the advantages of packaging in convenient collapsible tubes can now speed into consumption with the better tubes and inner coatings we make.

VINICOTE is our trade name for a big series of *more than fifty* collapsible tube linings developed and highly perfected by our research staff. Used in combination with *tough* SHEFFALLOY (Sheffield Process) Tubes, practically any product can be made completely inert to metallic reaction. Sheffalloy Tubes and Vinicote Linings represent an important wartime contribution to the health and well-being of Americans, and our fighting forces.

Sheffalloy TRADE MARK REGISTERED TUBES
SHEFFIELD PROCESS and VINICOTE Interior Coatings

NEW ENGLAND COLLAPSIBLE TUBE CO.

3132 SO. CANAL STREET, CHICAGO • NEW LONDON, CONN. • W. K. SHEFFIELD, 500 FIFTH AVENUE, NEW YORK
THE WILCO COMPANY, 6800 McKINLEY AVE., LOS ANGELES, CAL. • EXPORT DIVISION: 116 NASSAU ST., NEW YORK

MERCHANDISING NEWS and PACKAGING NOTES

NEW PRODUCTS FOR OLD: What are manufacturers doing to fill in the gaps in the ranks of their products due to limitations on materials? The alcohol limitation has sent everyone who has done a large cologne business scurrying for substitutes. The cream cologne is being taken up by many, although to Lucien Lelong goes the credit for being the first to merchandise it. Several new ones are in the making and will make an appearance early in the Spring. Some houses have cut down on sizes in order to spread the distribution of colognes and toilet waters. Creams and cakes and powders have all appeared as perfume carriers. Sachets haven't been so talked about since Grandmother was a girl. Shulton's new package, the Old Spice Tissue Box, is an example of the "dry" type of substitute. It holds a gaily decorated cylinder of talcum powder and three toilet size cakes of soap. The box itself may serve as a cleansing tissue dispenser, after the contents have been removed.

Another good example of the "dry" conveyor of fragrance is Lentheric's perfume powder-pact, a fragrant body powder in compressed form. It is highly concentrated and the perfume powder tablet yields fragrant, soft powder at the whisk of a puff, the fragrance of which is clinging and lasting. It is convenient for traveling, eliminating the nuisance of spilled powder, and it may well serve both as a bath powder and a substitute for cologne.

The so-called "solid" type of perfume has appeared on the market periodically under various names and in several guises, none of which, it must be confessed, ever became tremendously popular. Now, however, with the problem of shortages, and with improvements in manufacture, this type of product may come into its own. The introduction of Bourjois' Evening in Paris fragrance in this form is a recent example. Since no alcohol is required, it may well follow that colognes will be offered in solid form too!

Cosmetic stocking preparations appear to be a good bet for the spring and summer. Although there was an avalanche of them last summer, there are new ones in the making and there is much enthusiasm about their popularity again this spring and summer.

Make-up in cake form long a best seller, is now being adopted by practically everybody and may well take the place of some of the liquid types.

Many firms have enough products in the line so that if the production of some has to be curtailed, they get busy and endeavor to stimulate the sales of other items in the line which may not have ingredients on the priority list. In some cases, where substitutions are difficult, they can hope to maintain their volume by simply reducing unit sales and eliminating promotional packages that have been special values. Others, like the leading hair preparations, which are sold as specialties and not as lines, just change the formula and set out to do a job on the replacement product.

Everyone is resolved to maintain volume in spite of handicaps and in some cases it's done one way and sometimes the other. Already there is serious concern over shortages of merchandise for this year. This concern is especially apparent among the larger drug chains who have been selling a wide assortment of merchandise which is no longer available to them. They'd like to see more, rather than less cosmetics for sale and they're jockeying to get as much as they can. But the volume will have to be done the hard way, this year, that is to say without the merchandising frills. Gift packages, for example, will be around only by something close to a miracle of ingenuity. For the leathers and fabrics of the past are not only out, but paperboard as well may not be available for this kind of thing, so it will all have to be done with straight merchandise or maybe with mirrors.

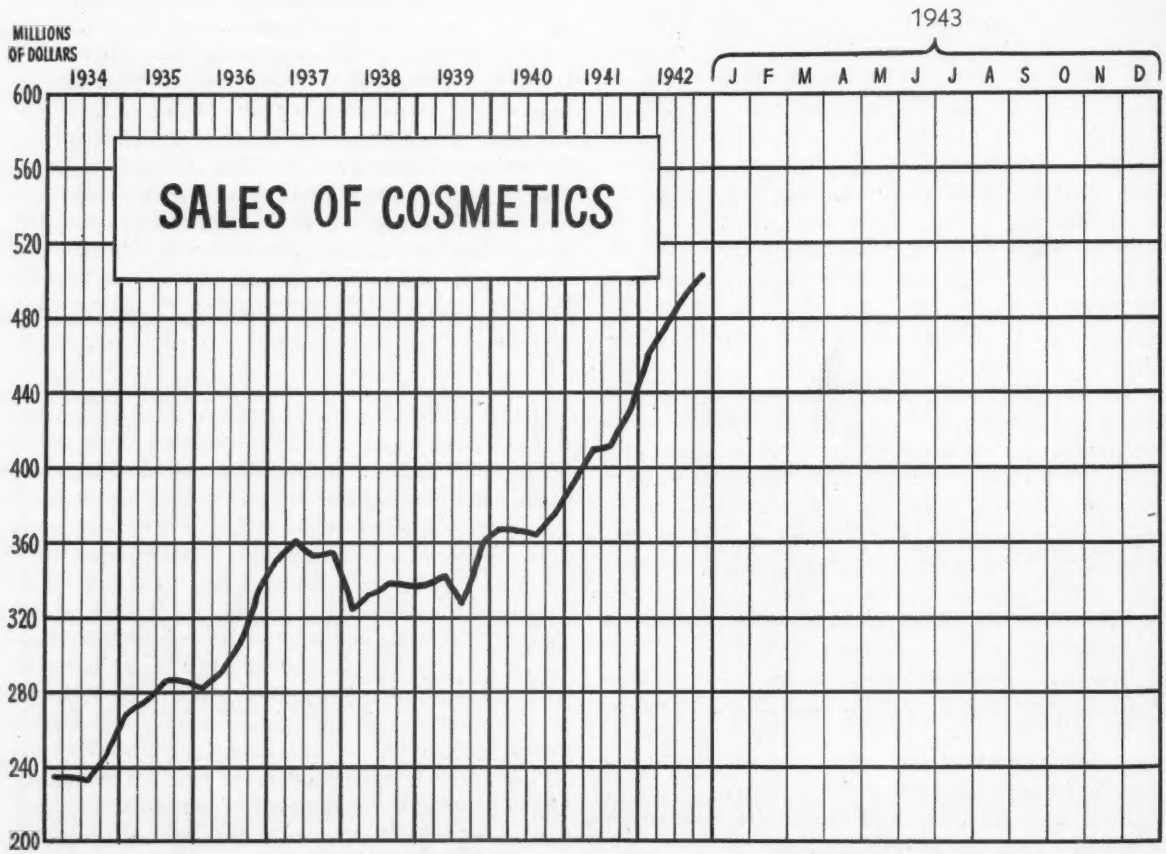
HAIR PREPARATIONS AND ALCOHOL: Largely overlooked in the excitement over what colognes will do with the 50 per cent. alcohol limitation is the quiet readjustment which the manufacturers of hair preparations have made with respect to their products. Many of the leading brands depended upon alcohol and others were also hit by the castor oil limitation. Yet there was no wailing or gnashing of teeth but quiet changes in formula and positive labeling and advertising on the new formula and its advantages. It's a 19 million dollar business at wholesale and therefore larger than the toilet water and cologne market, the alcohol restriction hits it harder because by and large the leaders sell just one product and do not have a wide variety of things to juggle around, yet the boys went about making the changes and selling what they could sell without any fanfare or hysterics. Let that be a lesson to you.

PERFUME COMEBACK: Some of the perfume houses are convinced that 1942 marked the end of the long drought in the dollar volume of perfume sales and that 1942 will bring a sharp movement to restore not only a new high volume in perfume sales, but will bring this old time leader back to its old, prominent place in the toilet goods departments of better stores. The last war accelerated the development of the modern, segregated toilet goods departments in retail stores. It made perfume first in these stores and developed an annual business which reached a peak, at wholesale, of twenty million dollars.

Then came the depression and all business, including the perfume and cosmetic, fell away. During the middle thirties business improved and a newcomer put in its appearance. This was the floral cologne, a highly dilute form of perfume which in ten years boosted the ration of toilet waters to perfume sales from less than 1 to 2 to 9 to 10—and this in dollar volume, not in units. Practically all of the finest and most popular odors were forced to go to the perfumed cologne, and from a perfume in a high price range limiting the purchasers to a relatively small part of the population, to a cologne selling from $1 to $3, thus tremendously expanding the potential market. The result was that everybody marketed a cologne and everybody promoted cologne, with perfume relegated to the status of "on call" merchandise.

Many of the leading perfumers believe that this war will complete the cycle and are backing this belief by centering a large part of their advertising on perfumers, rather than on make-up, colognes and gift novelties. The 50 per cent. limitation to alcohol use also is a factor in the picture since it appears obvious that dollar volume of cologne sales faces some reductions even though various merchandising and chemical devices are employed to maintain the unit package volume. Packaging limitations, too, are an aid to staple perfumes since the dollar novelty and the kaleidoscopic variety of cologne gift packages appear unable to survive the anticipated packaging limitations. When to these factors are added the fact that the consumer has money and the better stores have always been eager to bring perfume back, it begins to appear that all influences point in the same direction.

Hence the advertising which is being planned to promote this objective will have a double function—to sell perfume rather than cologne, and to put perfumes back in the choice counter locations in retail stores.



Sales of cosmetics for the twelve months ended December 1942 totaled $503,700,000. This represented an increase of 16.9 per cent over the $431,180,000 figure for the twelve months ended December 1941.

CIBA PRINTS LABELS DIRECTLY ON AMPULS: Although direct printing of labels on glass is in no sense new, for it had been successfully accomplished and we discussed it fully in these pages as far back as October, 1934, the first actual installation of a machine by a drug or cosmetic manufacturer to come to our attention is the one by Ciba. There it is used on ampuls in large government orders for Coramine and other parenterals. According to the Ciba release." "As a rule, operation of semi-automatic paper labeling,

little more than half as fast as the new process, must be set up from two to three days prior to packaging to assure sufficient labeled ampuls for economical production. Straightline production with the printing machine requires no preliminary operation before the line set-up.

"The printing machine can be adapted to ampuls ranging from one to five cc. Two colors may be printed with each operation. During the packaging each ampul is inspected and the relatively few imperfect ones are discarded."

THE COSMETIC TREND: The late Easter date (April 25) makes it practically certain that early spring cosmetic promotions will antedate Easter gift sales. It will have the advantage of getting the Easter demand well away from the this year unusually critical March 15th tax date. But it will upset the habitual ordering routine for the early part of the year in consequence of the quick succession of Easter, Mothers' and Fathers' Day sales peaks. Most of the gift merchandise is, of course, already ordered and the volume is approximately the same as during last year. However, cosmetic manufacturers must be prepared for rush orders late in March for regular and early supplies of hot weather items if we should have a warm Spring. So the regulars may crowd gift articles more than is desirable. Such specialties as cosmetic stockings, depilatories, deodorants may open up strongly before Easter.

Buyers are expecting a larger than usual demand for hot weather articles this year. Not so much because they are especially hopeful as regards their summer chances, but they feel that war workers and home maker will buy them more freely as an aid to their work. Home gardeners also are likely to make a heavy contribution to the demand and many stores will feature cosmetic skin protectors, protective creams, easy soluble pore fillers and similar articles among their seed and garden tool displays. Home gardeners are also expected to show interest in mosquito protectives and lotions which will appear in larger numbers on toilet counters this year.

Right now there is much interest shown in the perfume novelties that are entering the market in consequence of the alcohol shortage. Jellies, concentrates and the "milky" formulas are expected to be good sellers because of their novelty and well-promising utility appeal. Promotional suggestions include: rubbing the jellies into the wooden sides of lingerie drawers, concentrates for easy carrying and greater economy, and there is no denying the eye appeal of the milky toilet waters. Good sales ideas will come handy in view of the narrowing selection of scents and manufacturers will do well to develop them in their advertising.

Counters begin to notice a significant change in the attitude of the women customers. The luxury appeal is declining. Women war workers develop new cosmetic needs growing from the character of their respective employments and they expect the counter to present the solution. Customers are more hurried and have less time for cosmetic attention in the home. Hence there is more interest in complete treatments, speedy make-up, quick cleaners etc. Buyers hope that manufacturers will realize this trend and take care of it in their spot-of-sale advertising material. Otherwise the counters must do their own customers education.

Fashions take a back seat. As a result shade preference is very much left to the customers' own inclination. This does not mean that sales of lipsticks, nail polishes, powders, etc. will be less but only that manufacturers need not worry if they can not produce a large variety of shades.

Such fashion trends as may develop are likely to show up more in the method of use of the item or its application to a war created situation. Many stores are selling lip pomades as a soldier gift, handy apron assemblies holding a supply of cosmetics otherwise found upon the dressing table, for convenient cosmetic attention where dressing facilities are limited, and similar articles that add to the comforts of war time existence. Small cosmetic pouches, filled with every day necessities find ready acceptance.

There is no denying that counters are slowly taking on a new appearance. Some articles are missing, many new ones put in appearance. We are entering a period of change and, like all such periods, it opens many new opportunities for manufacturers who can see the writing on the wall and get there first.

Expert Assistance in the Development of

WAR TIME PACKAGES

For **SHELLS**

For **WAR MATERIAL** and Critical Devices

For **CONSUMER ITEMS**

affected by Government orders covering packaging materials

★ *Do you have a war time packaging problem?*

If the solution lies in a package made of paper, fibre tubing, felt, transparent plastic—or a combination of these materials with metal—*Ritchie can help you!*

For war time packages of every kind and every size, Ritchie developments have made possible a steady supply where otherwise there might be none.

Send for "War Time Packaging" which shows how Ritchie has helped others solve their packaging problems. Illustrates many new war time packages—many applications of substitute materials.

Typical examples of packaging problems to which Ritchie engineers have applied their skill and experience—

105 mm. shell containers made of fibre tubes with heavy metal ends . . . all-paper flashlight cells for U. S. Signal Corps . . . metal end fibre tube ration cans for U. S. Army . . . tinless cans for food products, cigars, etc. . . . moisture and grease-proof industrial packages . . . humidity measuring devices for adjusting machine guns . . . non-metal lipstick containers . . . shaker and pour top cans made entirely of non-critical materials.

W. C. Ritchie AND COMPANY

SET-UP PAPER BOXES
FIBRE CANS
TRANSPARENT PACKAGES

8821 BALTIMORE AVENUE • CHICAGO

NEW YORK DETROIT LOS ANGELES ST. LOUIS MINNEAPOLIS DENVER MIAMI

MENNEN WARTIME PACKAGES: Mennen, too, has adopted the cylindrical paperboard containers to replace the tin containers formerly used. The following release described what has been done and is especially interesting for the statement that "Mennen talcum for men today *outsells by far all other men's powders combined.*" In describing the new packages the story says, "In converting from the square metal containers to the new cylindrical packages, very little change has been made in package design. Same colors and general designs have been retained, adapted as closely as possible to the new shapes. Each new package has printed on the back the following: "New Victory Container—no change in quality or net content." The new containers operate very simply and efficiently. Instructions printed on swivel top state, "Turn top to holes—then perforate."

"Mennen Talcum for Men today outsells by far all other men's powders combined. Quinsana is the best-selling Athlete's Foot powder by a wide margin. Mennen Antiseptic Baby Powder is a top seller which registered sensational sales gains last year."

"Three new types of containers are en route to the production lines. They're all different, but they're all serviceable, well-made, easy to use. *Instead of depending on just one—we have three.*"

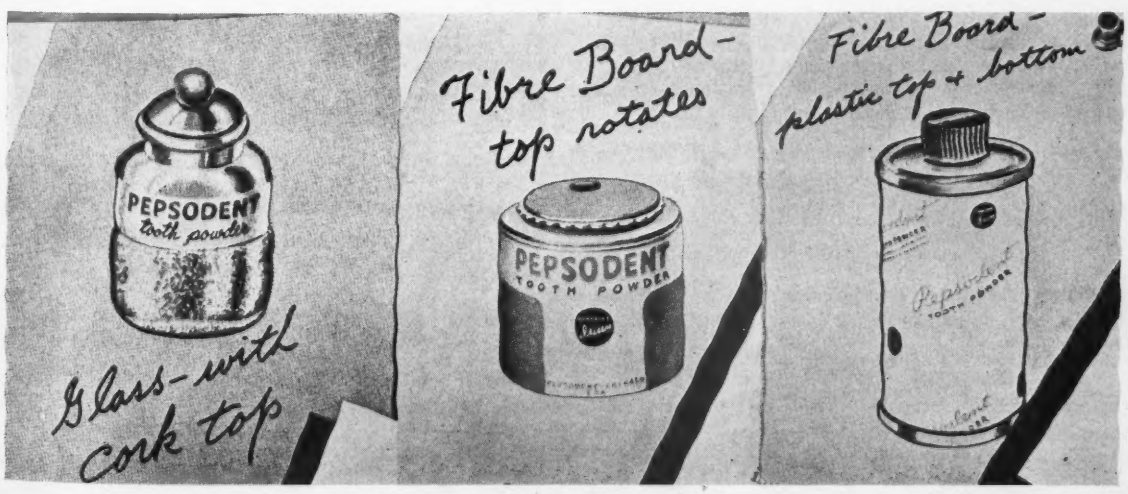
The three packages sketched in the accompanying illustration are 1. glass with cork top; 2. fibre board—top rotates; 3. fibre board—plastic top and bottom.

WHO'S BEEN SLEEPING?: At various intervals during the past year we have advocated the planning and preparation of two or three alternate packages. Under the headline, "Who's Been Sleeping?" Pepsodent is currently assuring retailers that it is doing just that in the case of its tooth powder. The copy reads in part:

"What's been bothering us is containers. And, that's just what we've been working on day and night. Take a look at the drawings on this page and you'll see what we mean.

Wood, plastic, glass, fibre, paper . . . we're knee deep in all of them. We're even using Scotch tape as a temporary closure to replace some caps that have been delayed.

BELOW TEEN-AGE MARKET SURVEY: Parent's Magazine's "Calling All Girls" has joined the ranks of survey makers with a study of its readers' (mostly 12-16-year old girls) brand preferences. The survey reveals nothing much that is new, for the girls picked the same brands that every other survey turns up as leaders. For instance, Ponds and Woodbury received 59.6 per cent. of the votes for favorite cleansing cream; Mum and Arrid 71 per cent. of the deodorant votes; Woodbury, Lady Esther, Ponds, Coty and Factor divided 66 per cent. of the face powder votes; and Jergens took 50 per cent. of the hand lotion votes.



The foresight and initiative displayed by Crown in being the first to develop a highly successful electrolytic tin-plating process suitable for closures, is now playing an important part in helping conserve America's rapidly dwindling tin supply.

By means of Crown's exclusive, electrolytic process, black steel plate is given a smooth, satiny tin coating —using considerably less tin than the amount formerly required by the old hot-dip method.

A large and steadily increasing volume of these Crown "Cemcoated" Closures have already found their way out into the regular channels of trade—where they have proved supremely efficient and completely satisfactory.

This is but one of the many ways in which Crown's vast peacetime facilities have been used to meet the challenging problems and sudden emergencies of a restricted wartime economy.

Because Crown Closures use less tin, those using Crown Closures are of course aiding our government in the conservation of vital war materials.

CROWN CORK AND SEAL CO., BALTIMORE, MD.

World's Largest Makers of Closures for Glass Containers

CROWN CLOSURES

CROWN'S WARTIME POLICY: *To supply closures, containers and services for packaging foods, beverages, chemicals, etc., needed by civilians and the armed forces. To build an ever-increasing volume of vitally needed weapons of war for our fighting men.*

SCENTED STATION RY: An interesting merchandising idea is presented by the Massenet scented stationery. A specially treated blotter retains the fragrance long after the notepaper has been used, and the box makes a splendid container for handkerchiefs, etc. The Altesse purple box of delicate pink billets-doux parfumes comes with two dainty 1-dram flacons of Altesse perfume and retails for $4.50. Since this perfume is a newcomer in the field and in the higher-priced brackets, the scented stationery with the two 1-dram flacons may serve as an good introduction.

BEST 5 & 10 PACKAGES: The annual packaging awards in the 5 & 10 field have been announced by "Syndicate Store Merchandiser" and as usual cosmetics are well represented. The award for the greatest counter display value went to Affiliated Products, Inc., for Kissproof lipstick; the award for greatest merchandising value gained from packaging design went to Tipstick Cosmetics for Tipstick lipstick; for best all-around package produced as the result of wartime restrictions to Northam Warren for Cutex powder polish; best use of packaging materials to Phillips & Benjamin Co. for Sno-Mist; and best all-around package produced as the result of wartime restrictions to Lehn & Fink for Pebeco tooth powder.

PAPERBOARD ORDER: The paperboard order affecting the products of this industry is expected momentarily. The various branches of this industry have made their recommendations and it is understood that the orders are now drawn up and awaiting completion of orders on board affecting other industries so that all may be issued at once and thus supplement general order L-239. In lieu of the texts of the specific orders, some of the recommendations which have been made are outlined below so that packaging plans may be developed accordingly.

Increase the number of units in carrier cartons as well as the number of carrier cartons or packers in a shipping case.

Re-use shipping cases for bottles received from bottle producers. Full re-use of shipping containers by wholesalers.

Discontinue the custom of wrapping bottles by pharmaceutical manufacturers. Where protection is needed for labels, a band or "sleeve" or protective coating be used instead of wrapping the entire bottle.

Ask all customers to accept drug products over the counter without additional wrappings other than the cartons the products came in originally.

Eliminate all folders other than the one wrapped with the package. The size of this folder would be limited to the present size of the main direction folder.

Where drugs are packed in cartons using a carton liner between the bottles and the carton, such packing should not require further liners or partitions.

Adopt standard caliber paperboards. The War Production Board has recommended to the folding box industry that the following figures be followed: For products weighing less than 8 oz. maximum caliper .016; for products weighing less than 14 oz. maximum caliper .018; for products weighing over 14 oz. maximum caliper .020.

Accomplish large savings of virgin wood fiber by using patented or clay coated stock with liners.

Eliminate corrugated wrappings inside of the cartons where these are not absolutely essential to protect fragile containers, and if they are essential the lowest grade jute be utilized.

Eliminate all nests, liners and pads and dividers wherever possible, also eliminate special flap cut cases.

Reduce window displays, jumbo cartons, dummy cartons, window stickers, etc., to the minimum for the duration. It must be remembered that Order L-239, covering folding and set-up boxes, eliminates further use of the dummy carton.

No paper, paperboard, or pulp in any form be utilized in distributing samples to the consumer.

It is also expected that set-up boxes of elaborate types such as those used in packaging vitamin capsules and in packaging perfumes and cosmetic gift sets will also be severely curtailed in their use of paperboard.

- More Uniform Particle Size
- Perfect Color Distribution
- Non-powdery Appearance
- Stays On
- Over 100 Shades Available

Kolmar's Face Powder meets the most exacting standards of the industry. Because it is produced by the original hi-air pressure method, it is uniformly superior.

We will be pleased to send samples to you for laboratory tests.

Available in bulk, or packaged to your needs. Write today for samples and quotations on your individual requirements.

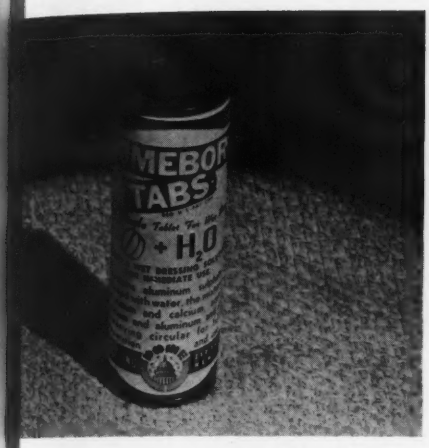
Representatives:

Mr. M. C. Boyd, Quinby Building, Newark, N. J.
Mr. Douglas Haggerty, 122 E. 42nd St., New York City
Mr. Warren Curry, 2504 Alton Road, N. W., Atlanta, Ga.
Mr. Norman Kole, 980 Merchandise Mart, Chicago, Ill.
Mr. R. F. G. Byington, 1260 N. Western Ave., Los Angeles, Cal.
Mr. Richard F. Spicker, 419 West Fifth Street, Cincinnati, Ohio

Milwaukee · Newark

DOME CHEMICALS CO.

Dome Chemicals, Inc., now offers its Domeboro Tabs in a convenient cylindrical paper container which retails for 50 cents, in addition to the bottles of 100, 500, and 1,000. Domeboro Tabs represent a new technique in wet dressing therapy. One tablet in 8 ounces of tap water makes a lead-free and stable aluminum subacetate solution.



DOME CHEMICALS, INC.

VITAMIN CORP.

The Vitamin Corp. of America, has selected an amber glass bottle for its Vitamals, in order to obtain an outstanding color scheme which would attract the public's eye and which would lend itself to mass display. The bottle, by Owens-Illinois Glass Co., is sealed with a screw top closure and is packaged in an attractive carton which carries out the general motif of the bottle label.

VITAMIN CORP. OF AMERICA

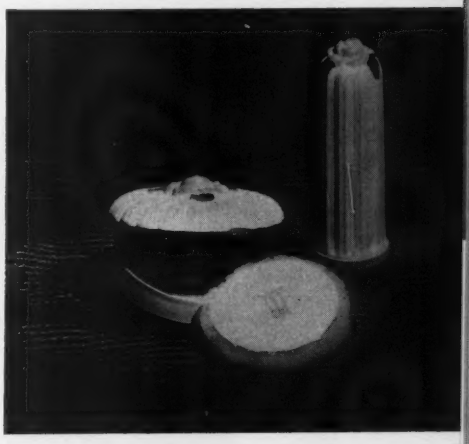
TONE

Cream-Deep Cologne is the name of Tone's new luscious creamy cologne in a delicate shade of pink. It is suggested as a body-rub for after the bath or shower, and also as a hand lotion. Cream Deep Cologne is presented in fresh, feminine Dahlia fragrance.

TONE

CHARLES OF THE RITZ

Charles of the Ritz presents a new Moss Rose plastic lipstick and rouge compact. They are made in a beautiful white porcelain finish designed to resemble a drape held in place with a hand-painted rose. Though they look fragile and delicate, they are unbreakable.



CHARLES OF THE RITZ

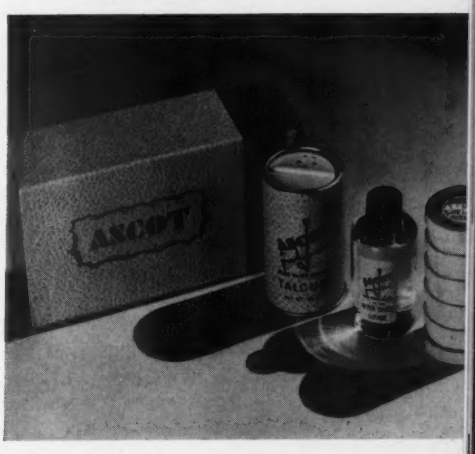
BASTIEN CO.

The Bastien Co. announces its "American Lady" line of bubbling bath preparations and bath salts attractively packed in a combination with a series of colorful, hand painted ceramics, which may be used as tea tiles, or as wall plaques for kitchen or dinette decoration. The bubbling bath crystals are also packaged in a rose bowl, and a liquid bubbling bath comes in a glass jug.

BASTIEN CO.

SOLON PALMER

Solon Palmer presents the Ascot air travel kit for men—a handy, slide-open case, small enough for the pocket of any dressing gown. It contains full shaving soap stick in a smart jacket of natural wood, talcum, and a 1 ounce bottle of after-shave lotion, all scented with the popular Ascot odor.



SOLON PALMER

NEWS

Associations

Drug and Chemical Dinner March 4

More than 100 members of the publicity and reception committees for the dinner of the Drug, Chemical and Allied Trades Section of the New York Board of Trade met January 27 at the Waldorf-Astoria to plan the 18th annual dinner of the organization which will be held there March 4.

VICTOR E. WILLIAMS

Victor E. Williams, Monsanto Chemical Co., chairman of the Section, who presided at the meeting, announced that reservations for the dinner were very heavy.

Charles C. Caruso, Schieffelin & Co., chairman of the reception committee, announced that this year, following the precedent set last year when the American Red Cross received a substantial contribution as the result of the dinner, the United Seamen's Service, Inc. would benefit from the dinner. E. T. T. Williams, Becton, Dickinson & Co., chairman of the publicity committee for the dinner, pointed out that merchant seamen have received all too little recognition for their contribution to the war.

The price of the tickets will be the same as last year—$10 per plate; tables of ten—$100.

A.D.M.A. to Chicago

The annual convention of the American Drug Manufacturers' Association will be held May 2, 3 and 4 at the Palmer House, Chicago. John G. Searle, president of G. D. Searle & Co. and of the association, has announced that this meeting will be streamlined to fit the conditions of wartime.

The program is not completely worked out as yet but it now calls for

JOHN G. SEARLE

the meetings of the scientific, biological and legislative sections to be held on Sunday, May 2, and the general sessions to run all day Monday and conclude Tuesday afternoon. In the past the general sessions have been held in the mornings only with the afternoons given over to other activities. There will be speakers at both the Monday and Tuesday luncheons and at the dinner on Monday. It is planned to have a number of leading Army and Navy officials as speakers.

Revson Head Beauty Inst.

Martin E. Revson, general sales manager of Revlon Products Corp., was elected president of the National Beauty and Barber Industries Association, at the association's annual meeting held at the Waldorf-Astoria Hotel, New York, January 27. L. D. Sandahl, F. W. Fitch Co., is first vice-president and Lester Stone, attorney, was named general counsel and executive secretary.

Buckley Heads Vanilla Assn.

The eighth annual meeting of the Vanilla Bean Association of America, Inc., was held at the Hotel Lafayette, New York, January 29. Following the reports of M. Cortizas, M. Cortizas &

EDWARD S. BUCKLEY

Co., Philadelphia, retiring president, and J. Manheimer, J. Manheimer, Inc., New York, treasurer, officers were elected for 1943.

The new officers are: president, Edward S. Buckley, Thurston & Braidich, New York; vice-president, Francis T. Dodge, Dodge & Olcott, New York; treasurer, J. Manheimer, Members of the executive committee elected were: M. Cortizas, Fred Huber, F. Huber Co., New York, and William H. Triest, Zink & Triest, Philadelphia.

The election of officers was followed by the annual dinner.

O'Brien Heads Can Institute

Frank J. O'Brien, executive vice-president of Continental Can Co., New York, has been elected president of the Can Manufacturers' Institute. Mr.

. . . with them marches *measured purity*

Over strange roads . . . and on familiar streets . . . they move. Men in the armed services. Civilians in home defense.

With them goes *advance* protection.

It comes from the pharmaceutical laboratories of the nation. Hundreds of products—from foot powders that relieve aching feet to preparations that fight infections—make these marching men and women healthier, stronger, more fit for today's emergencies.

And behind these products is still another factor.

It is the fine chemical.

Often, the effectiveness of a product is assured by the purity of the fine chemicals which are its component parts.

At Baker . . . it's *measured purity* in fine chemicals . . . purity to predetermined, exacting standards.

Leading pharmaceutical manufacturers appreciate Baker's fundamental principle—"there shall be no compromise with quality."

If you buy fine chemicals or have a fine chemicals problem that requires exacting, measured purity, write us. Perhaps we can help you, too!

J. T. Baker Chemical Co., ***Executive Offices and Plant:*** **Phillipsburg, N. J.**
Branch Offices: **New York, Philadelphia and Chicago.**

Baker's

Baker's fine chemicals

for dependable Fine Chemicals

Heyden

FINE HEYDEN CHEMICALS

Benzyl Chloride

Refined and Technical Grades

Uniformity assured by Heyden high standards • Cleanliness maintained to point of use by modern containers.

BENZALDEHYDE • BENZAL CHLORIDE • BENZOIC ACID
BENZO TRICHLORIDE • BENZOATE OF SODA

FORMALDEHYDE • PARAFORMALDEHYDE • HEXAMETHYLENETETRAMINE
SALICYLIC ACID • METHYL SALICYLATE • PENTAERYTHRITOL

Write for current products list

Help us maintain good service by speeding return of used tank cars, drums and carboys which have served their purpose.

HEYDEN CHEMICAL CORPORATION

50 UNION SQUARE, NEW YORK

Chicago Branch — 180 N. Wacker Drive

O'Brien who has been actively connected with the can manufacturing industry for more than twenty-five years, joined Continental in 1928 when it acquired Southern Can Co., Baltimore, of which he was vice-president and general manger.

B.I.M.S. Annual Dinner

The members of the Bims held their annual dinner at the Hotel Lafayette, New York, on January 21, 1943. Some one hundred and fifty members and their guests gathered under the leadership of the national chairman, Martin F. Schultes, to celebrate in accordance with the creed of the Bims—"don't treat, don't talk business, promote good fellowship and have a good time." Organized a number of years ago, the Bims (buyers, importers, manufacturers, salesmen) have expanded tremendously on the basis of this simple program, predicated upon good fellowship.

The annual meeting this year was patriotic in character and all prizes, twenty-six in number, were in the form of war bonds. The foreword on the handsomely printed menu emphasized this with the statement, "Liberty, Equality, Fraternity. Only three words—borrowed by the French Republic from our revolutionary struggle for Freedom—they represent the foundation upon which our American way of life was built. Let us B.I.M.S., who meet because of friendship, memorize them—explore their every meaning, and faithfully promise to continuously live up to them."

Mr. Schultes has also announced that the executive committee has selected Thursday, January 19, for the 1944 annual dinner. Prize winners at this year's dinner were: Karl Voss, Karl Voss Corp.; Herbert T. Georgi, Houbigant Sales Corp.; Austin F. Zicht, H. S. Benedikt, Inc.; Dudley Shaw, Allen B. Wrisley Co.; N. Bonelli, Bonelli Drug of Puerto Rico; Clifford H. Marsh, Menley & James, Ltd.; H. Broder, Harry Broder Co.; Edward W. Kinsella, O. Dexter Neal, Hilton Davis Color Co.; Peter L. Forsman, C. H. Forsman & Co.; John E. Gabrielsen, Allied Products, Inc.; Michael Healy, Naugatuck Aromatics; Charles O. Homan, Dodge & Olcott Co.; F. G. Buehler, George Lueders & Co.; Arthur J. Sloss, American Sponge & Chamois Co.; Charles M. Macauley, Pro-phy-lac-tic Brush Co.; Frank W. Mahr, Blake Mfg. Co.; Frank N. Nicholson, Richardson-Taylor-Globe Corp.; Frank L. Graham, De Vilbiss Co.; George H. Sands, Elizabeth Arden; James F. Garvey, George Schmitt & Co.

Door Prize Winners: Guest Prize, F. S. Ammerman, Odorbase Mfg. Co.; Members Prizes, Frank W. Green, National Aniline Division, Allied Chemical & Dye Corp.; Maurice B. Price, M. B. Price Associates; Frank N. Nicholson, Richardson-Taylor-Globe Corp.; Frederick L. Butz, White Metal Mfg. Co.

LoBue Heads Salesmen

Phil LoBue, eastern representative for Michigan Chemical Corp., was installed as president of the Salesmen's Association of the American Chemical Industry at a meeting in the Chemists' Club, New York, January 21. Mr. LoBue was named to the presidency of the association by the executive committee following the resignation of Gerald S. Furman, Merck & Co., who had been elected by mail but who was unable to serve because of his activities in connection with the war.

PHIL LOBUE

Other officers named by the executive committee were: vice-president, Frank Fanning, Malstrom & Co.; treasurer, Charles Alexander, L. Sonneborn Sons, Inc., and secretary, James McInnes of Commercial Solvents Corp. John A. Chew and Edward S. Burke were elected to the executive committee.

Foragers Banquet

The Foragers held their forty-fifth annual banquet at the clubrooms and in the main dining room of the Midston House, New York, January 9. The occasion was marked by the presentation to the retiring president, H. T. Georgi, of an illuminated terrestrial globe and a handsome wallet. Mr. Georgi had completed a service of four successive years as president of the organization, a period marked by outstanding progress in its affairs.

Frank L. Graham acted as toastmaster, with his customary skill, and other speakers included Corporal Frank Cameron, U. S. M. C., who gave a vivid, personal description of conditions, and the fighting on Guadalcanal; Walter A. Conklin, the Foragers' new president; Richard R. Powell, vice-president, and Arthur J. Connelly, secretary-treasurer.

T.G.A. Meeting Changed

New dates have been set for the annual convention of the Toilet Goods' Association. It is now scheduled for the Waldorf-Astoria Hotel, New York, May 12 and 13.

L. S. Root, chairman of the convention committee has appointed the following members of the raw material and supply industries to serve with him on that committee: A. C. Burgund, Carr-Lowrey Glass Co.; Charles Fischbeck, P. R. Dreyer, Inc.; P. E. Haebler, Goldschmidt Chemical Corp.; W. E. Klaas, Brass Goods Mfg. Co.; M. Lemmermeyer, Aromatic Products Inc.; M. F. Martin, U. S. Industrial Alcohol Co., W. P. Murray, Continental Can Co.; Karl Voss, Karl Voss Corp.; and J. Blaine Walker, Hazel Atlas Glass Co.

F.W.D.A. Meeting

The 1943 mid-year meeting of the Federal Wholesale Druggists' Association, known as "The Road Ahead Conference" was held at the Biltmore Hotel, New York, February 3 and 4.

The subject for the morning session Wednesday, February 3 was: "The Road Ahead for the Nation." The speakers included Carl Hendrickson, National Planning Unit, U. S. Department of Commerce; Ralph Hendershot, Financial Editor, N. Y. World-Telegram; Paul T. Cherington, McKinsey & Co.; Walter C. Baumhogger, president, United Cigar-Whelan Drug Stores; and James Hill, Jr., president, Sterling Drug, Inc. The afternoon meeting was devoted to "The Road Ahead for Pharmacy." The speakers were Dr. Arthur Freeborn Chace, president, New York Academy of Medicine; Brigadier General Joseph W. Byron, chief, Army Exchange Service; H. W. Meyer, Mgr., Wholesale Division, International Cellucotton Products Co.; F. S. Dieterich, vice-president, The Mennen Co.; and I. K. Fearn, vice-president, American Thermos Bottle Co.

The meetings on Wednesday were attended by wholesalers and manufacturers while wholesalers met in closed sessions on Thursday, February 4. An

MORE THAN MOST PRODUCTS that originate in the laboratory, synthetic aromatics are dependent on the skill, experience and facilities of the chemists who produce them. In this respect Dow Synthetic Aromatics profit by an exceptional advantage. They are heirs to a vast scientific knowledge spanning a period of more than fifty years. They reflect the success of a long series of chemical achievements in many fields of endeavor. They are reliable products you can be certain will fulfill their specific assignments.

THE DOW CHEMICAL COMPANY, MIDLAND, MICHIGAN

New York City · St. Louis · Chicago · San Francisco · Los Angeles · Seattle · Houston

Synthetic

AROMATICS

Dow aromatics include Diphenyl Methane, Diphenyl Oxide, Indol, Coumarin, Methyl Anthranilate, Methyl Salicylate, Methyl Phenyl Carbinyl Acetate, Phenyl Ethyl Alcohol and Styrene P-100.

DOW

CHEMICALS INDISPENSABLE TO INDUSTRY AND VICTORY

informal dinner Wednesday was addressed by Gene Flack, trade relations counselor, Loose-Wiles Biscuit Co. and vice-president, Sales Executive Club of New York.

Phila. Drug Exchange Meets

The 82nd annual meeting of the Philadelphia Drug Exchange was held January 26 at the Down Town Club, Philadelphia for the bi-annual election of officers and directors. R. G. Anderson, Merck & Co., was re-elected president and other officers re-elected were: vice-president, Charles E. Vanderkleed, McNeil Laboratories, Inc.; secretary, J. Mervin Rosenberger, Smith, Kline & French, Inc.; treasurer, Harold C. Halberstadt, Shoemaker & Busch, Inc.

The following evening, January 27, the Exchange held its annual dinner at the Bellevue-Stratford Hotel.

Ostrom Heads Rationing Board

John Ostrom, secretary of the Drug, Chemical and Allied Trades Section of the New York Board of Trade, has been made chairman of the War Price Rationing and Quota Boards of OPA with headquarters at 150 Nassau St., New York.

A.A.S.G.P. Elects

At the annual meeting of the Association of American Soap and Glycerine Producers, held at the Mayflower Hotel in Washington, E. H. Little, president of Colgate-Palmolive-Peet Co., was elected president of the association.

Other officers elected were: vice-presidents, F. A. Countway, president of Lever Brothers Co. who has also served as president of the association, D. M. Flick, vice-president of Armour & Co., and F. H. Merrill, president of the Los Angeles Soap Co.; treasurer, N. S. Dahl, John T. Stanley Co., New York; Assistant-treasurer, A. Roy Robson, Fels & Co., Philadelphia; and secretary, Roscoe C. Edlund, New York, manager of the association.

Companies

Searle Bond Drive

Led by an inspired committee from among their own ranks, the employees of G. D. Searle & Co., Chicago, pledged 11.25 per cent. of their salaries for the purchase of War Bonds in 1943. Not a single member of the organization failed to pledge a share of his or her salary and many subscribed well over the 10 per cent requested.

The laboratory war bond committee, in a formal presentation, gave John G. Searle, president of the company, a Treasury Bullseye flag and an award certificate from the local war savings Staff.

Horsey Joins Givaudan

Robert E. Horsey joined the sales staff of Givaudan-Delawanna, Inc., January 1. He will concern himself with the new products division and is well qualified by technical education, training and experience to handle the sales application of such developments.

Atkinson Elected Vice-President

Norman G. Atkinson, western manager for The House for Men Inc., at a meeting of the board of directors in January, was elected to the position of vice-president and placed in full executive charge of the western division, with offices and display room at 607 South Hill St., Los Angeles.

Ritz Wins Display Award

A window display of Charles of the Ritz took third place in a window display contest open to all retail stores in New York, which was sponsored by the Metropolitan Opera Association during the opening week of the opera season.

Shepherd With Schiaparelli

Gerald H. Shepherd has been appointed sales representative for Parfums Schiaparelli, New York. He will cover the southern and mid-western territory.

Cubicciotti Joins Sonneborn

Rudolph R. Cubicciotti is now associated with L. Sonneborn Sons, Inc., New York. He will act as executive assistant to Julius F. Roten, vice-president of the company.

RUDOLPH R. CUBICCIOTTI

Immediately after his graduation from the University of California as chemical engineer, Mr. Cubicciotti joined the Union Oil Co. of California. During seventeen years with that organization he was actively engaged in the refining, research and sales divisions.

Merck Wins "E"

The Army-Navy Production Award was presented to the men and women of Merck & Co.'s Rahway plant, February 9, at four o'clock. Following the ceremony, George W. Merck, president of the company, gave an informal dinner at the Hotel Robert Treat in Newark, N. J. Lowell Thomas spoke at the dinner, making his regular broadcast from the table.

Laboratory War Bond committee obtains a "plus" subscription from John G. Searle, president of G. D. Searle & Co.

Calco Receives Army-Navy E

The Army-Navy "E" Award for excellence in war production was presented to the workers and management of the Calco Chemical Division, American Cyanamid Co., Bound Brook, N. J., January 20, at a colorful ceremony which was broadcast throughout the metropolitan area. General Alden H. Waitt, Chemical Warfare Service, Army of United States, presented the award which was accepted by F. M. Fargo, Jr., general manager. Insignia pins for every employee were presented by Commander Herman J. McCarthy, United States Navy, and accepted for the employees by Frank J. Pucci, president of the Chemical Workers Union Local. Paul Robeson opened the ceremonies with the song, "America" and concluded them with the national anthem in which the audience of more than 4,000 joined.

General Waitt emphasizing the importance in the war effort of the place held by workers in the chemical industry said, "Without them, many lives would be lost through lack of proper medication. Without them, essential camouflage, based upon fast-to-light dyestuffs, would be impossible. Without them, rubber in its myriad forms would harden and crack and be all but useless to the United Nations' war machine."

Representative Charles A. Eaton of New Jersey in an address of welcome made a stirring appeal for "more and more" production. E. J. Dempsey, works manager at Calco, acted as master of ceremonies.

Advertising for War Bonds

The Drug, Cosmetic, and Allied Industries Committee to promote the sale of War Bonds has announced that as of January 19 the following companies were participating in the campaign: Alkalol Co., American Cyanamid Co., American Home Products, Elizabeth Arden, Armand Co., Associated Distributors (Dana Cosmetics), Barbasol, Bathasweet, Bauer & Black, Becton, Dickinson & Co., Bristol-Myers Co., Bourjois, Burma Vita, Burroughs Wellcome, Carter Products, Ceribello, Chap Stick Co., Colgate-Palmolive-Peet, Contil Coty, Denver Chemical Co., Drug Products Co., Father John's, Emerson Drug Co., Fellows, Forhan's, Fougera & Co., Foley & Co., Frailey Products, Inc., Grove Laboratories, Guerlain, Gillette Safety Razor Co., Hoffman-LaRoche, Johnson & Johnson, Houbigant, Hudnut Sales Corp., International Cellucotton, Iodent, Kilmer Co., Lady Esther, Lambert Pharmacal Co., Lederle Laboratories, Lewis-Howe, Thomas Leeming, Lucien Lelong, Lever Brothers, Maybelline, O. E. McKewen Co., Mennen Co., Miles Laboratories, McKesson & Robbins, Parke-Davis & Co., Pepsodent Co., Pinex, Norwich Pharmacal Co., Parfums Ciro, Parfums Weil, Pharmacraft Co., Resinol Co., Schutter Candy Co., Seeck & Kade, R. B. Semler, Sterline, Products Serutan, Helena Rubinstein, Sales Builders (Max Factor), Shulton, Vadsco Sales, Vick Chemical, Weco Products, William R. Warner Co. (Sloan's Liniment), Willard Tablet Co., White Laboratories, and Zonite Products Corp.

Integrated national advertising by the drug, cosmetic and allied industries has recently been materially expanded, according to Lee H. Bristol, Bristol-Myers Co., chairman of the industry policy committee and space and money already contributed are in a volume comparable with some of the most extensive business campaigns in the nation.

Fredholm Appointed New York Mgr.

Jess H. Whiteley, director of sales of Associated Distributors and Dana Perfumes, announces the appointment of Victor A. Fredholm as New York manager, in charge of the New York and New England territories, with offices at 610 Fifth Ave. Mr. Fredholm has been connected with the industry for the past 22 years. He started with George Borgfeldt & Co. in 1920. He also represented Bourjois, Charles of the Ritz, and in 1930 joined Northam Warren Corp., which he represented until 1942, when he joined Associated Distributors as eastern district sales manager.

Merrell Advances Shelton

The Wm. S. Merrell Co., Cincinnati, has announced the promotion of Robert S. Shelton, Ph.D., to the position of scientific director. Dr. Shelton will be responsible for all activities of the scientific staff relating to research and product improvement.

L. Dale Seif has received the title of chief chemist under the new set-up, and will have complete charge of all analytical and control work. The biological section of the Merrell laboratories will be headed by L. V. Blubaugh, Ph.D., who now becomes chief of the biological research and production departments.

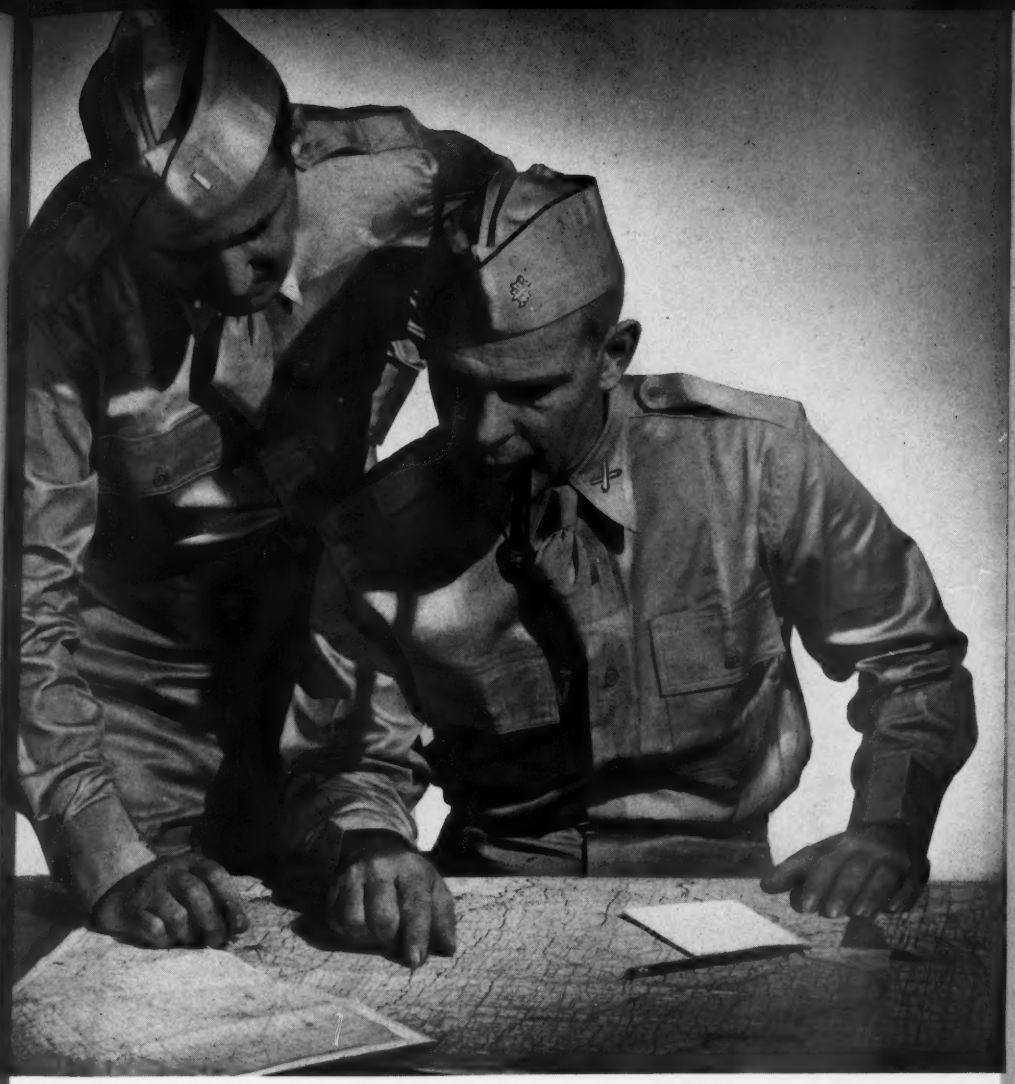
Sharp & Dohme Gets "E"

Sharp & Dohme, Inc., was the recipient of two Army-Navy "E" 's for excellence in war production on February 10. The Award was presented to the pharmaceutical division in Philadelphia in the morning and to the biological division, Glenolden, Pa., in the afternoon.

Lederle Sulfadiazine Book

Reports of results in the use of sulfadiazine have appeared in medical literature in such large numbers that Lederle Laboratories, Inc., has issued a second volume of abstracts and bibliography to supplement its previous compilation covering 1941.

Left to right: F. M. Fargo, Jr., general manager of Calco Chemical Co.; General Alden H. Waitt; Commander Herman J. McCarthy; and Frank J. Pucci.



EDWAL CHEMICALS

Acetylacetone
p-Acetylaminophenol
Acetylpropionyl
Allantoin
Alloxan Monohydrate
Allyl Alcohol
Allyl Amine
Allyl Bromide
Allyl Chloride
Allyl Thiourea
Aluminum isopropylate
Aminobenzthiazole
Ammonium Thiosulfate
Anhydromethylenecitric Acid
Benzalazine
Benzaldehyde Semicarbazone
Benzotriazole
Bismuth Sodium Iodide
n-Butyl Bromide
Cetyl Bromide
Cetyl Iodide
Cetyl Pyridinium Bromide
Cetyl Pyridinium Chloride
Cetyl Pyridinium Iodide
Chlorohydroquinone
Decamethylene Dibromide
Decamethylene Glycol
Diacetylaminoazotoluol
Diallyl Disulfide
Diallyl Sulfide
Diaminophenol Dihydrochloride
1-Diazo-2-Naphthol-4-Sulfonic Acid
Diazosulfate of p-Aminodiphenylamine
p-Diethoxybenzene
o-Dihdroxybenzene
Dimethylaminoazobenzene
Ethyl Iodide, C.P.
Hexamethylene Tetramine
Anhydromethylene Citrate
p-Hydroxphenyl-aminoacetic Acid
1-Methylallylamine
Methyl Iodide C.P.
Monoacetylaminoazotoluene
Nitranilic Acid
sec-Octylbromide
sec-Octyl Malonic Ester
Oil of Mustard, Artificial, U. S. P.
Parabanic Acid
o-Phenylenediamine
p-Phenylenediamine
Phenyl Mercuric Acetate, C.P.
Phenyl Mercuric Hydroxide
Phenyl Mercuric Naphthenate
Phenyl Mercuric Nitrate, C.P.
Phenyl Semicarbazide
Phloroglucinol
Phthalonic Acid
Propionyl Acetone
Quinine Bismuth Iodide
Semicarbazide Hydrochloride, Pure
Semicarbazide Hydrochloride, Tech
Sodium Cyanate, 95%
Uric Acid, Purified
Uric Acid, Tech.

Write for new catalog 26D!

Keeping SECRETS *Is* EDWAL'S *Business Too!*

FREE BROCHURE

Bulletin 21D, "How The Independent Chemist Can Help You", explains Edwal services in greater detail. Send for your copy now.

Many companies engaged in war production are turning to Edwal, not only for special chemicals which are difficult to obtain, but also for assistance in handling research problems. For some of these manufacturers Edwal is now busy formulating new products to be presented when victory has been won.

For other companies, Edwal is developing improvements in processes that will mean production at lower cost and increased profits. Why not put your chemical research problems up to this staff of experienced chemists and chemical engineers?

EDWAL

The **EDWAL** *Laboratories, Inc.*

Manufacturing Division

732 FEDERAL STREET CHICAGO, ILLINOIS

AVERTING SHORTAGES...

Digitonin

● Soon after the outbreak of the war, research chemists and institutions became deeply alarmed that DIGITONIN would be unobtainable. Only from Europe, they thought, could supplies be secured.

Faced with the prospect that valuable research work might have to be curtailed or indefinitely postponed, chemists and hospitals alike appealed for aid in securing supplies of this research-important chemical.

S. B. Penick & Company was able to meet the demands of these scientific workers with its stocks of DIGITONIN, manufactured in its own laboratories. The quality of S. B. Penick & Company's DIGITONIN has fully equalled the standards of imported material.

Not only have spot stocks proved ample, but the raw material situation also is satisfactory. Of domestic origin, large reserve stocks are safely stored in S. B. Penick & Company's warehouses.

Thus, this specter of shortage has been entirely laid to rest.

Number 4 of a series of advertisements on how S. B. PENICK & COMPANY is helping to avert shortages in important plant alkaloids which hitherto were imported from Europe.

IT'S YOUR AFFAIR! Why not make it your business to attend the Annual Drug, Chemical and Allied Trade Section Dinner, at the Waldorf-Astoria Hotel, on March 4, 1943. Order your tickets now.

S. B. PENICK & COMPANY

ALKALOID EXTRACTING MANUFACTURERS

50 Church Street
New York, N. Y.

735 W. Division Street
Chicago, Illinois

"Buy War Bonds and Stamps—for Victory"

THE WORLD'S LARGEST BOTANICAL DRUG HOUSE

He's our No. 1 customer, today!

AND HE'LL CONTINUE TO BE, UNTIL VICTORY!

UNCLE SAM is placing some mighty important orders, today. They're important to all of us. They've got to get the green light. And they're getting it, here at Gardner-Richardson . . . in our research laboratories, in the plants, all up and down the production line.

The war has proved the worth of paperboard and cartons to do a real job, to perform an outstanding service. Paperboard has been ingeniously fashioned and treated to stand up under the most severe conditions—from the hot, humid jungles of New Guinea to the penetrating cold of the Arctic.

Specially developed cartons are helping protect as well as pass the ammunition. They're helping get ordnance parts to the front lines faster, in better condition.

Special cartons for dehydrated foods are multiplying the space in the holds of ships, lightening field packs of our boys on the front lines. And on the home front, paperboard is stepping into the job of many critical metals that have gone to war.

Gardner-Richardson is proud to be a part of an industry that has so many service stripes on its sleeve. We—all of us—will continue to serve and find new ways to serve, until the last shot is fired and Uncle Sam says, "The job is done."

The GARDNER-RICHARDSON Co.

Manufacturers of Folding Cartons and Boxboard

MIDDLETOWN, OHIO

GARDNER-RICHARDSON
FROM PULP TO FINISHED PRODUCT
ENGINEERED PRECISION

Sales Representatives in Principal Cities: PHILADELPHIA • CLEVELAND • CHICAGO • ST. LOUIS • NEW YORK • BOSTON • PITTSBURGH • DETROIT

. . . . . *You'll enjoy attending the 18th Annual Drug, Chemical and Allied Trades Dinner at the Waldorf-Astoria, New York, Thursday, March 4th.*

Carnation #300

An outstanding reproduction of the fragrance of this ever popular flower. Can be used to advantage wherever an intense, economical perfume is indicated.

It will repay you to investigate its possibilities.

Priced at only $3.50 per pound.

Lower for quantities and contractual requirements.

Samples available to manufacturers only.

ORBIS

PRODUCTS CORPORATION

215 PEARL STREET, NEW YORK · FACTORY & LABORATORY, NEWARK, N.J.

CHICAGO
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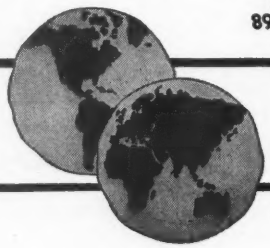
Water Soluble Gums	Waxes	Cosmetic Raw Material	Fruit Flavors
Thymol	Stearic Acid	Oleo Resins	Food Colors
Aromatics	Essential Oils	Perfume Bases	Quince Seed
Rice Starch	Zinc Oxide French	Olive Oil	Irish Moss



Allen Named Vice-President

Joseph M. Allen, advertising manager of Bristol-Myers Co., was appointed to the post of assistant vice-president at the annual meeting of the board of directors held at the company offices in New York, February 3.

Mr. Allen joined Bristol-Myers in 1917 in the sales promotion department after having served with the Bishop Calculating Recorder Co. as sales promotion manager, and the Home Pattern Co. as sales promotion manager and assistant sales manager.

JOSEPH M. ALLEN

Following his work in the sales promotion department of Bristol-Myers, he became personnel director, during which time he worked out plans and policies that are still in effect. He later worked in the sales department and in 1924, became assistant to Lee H. Bristol who had just joined the company as advertising director.

For about nine years after Bristol-Myers entered the radio advertising field in 1925, Mr. Allen remained in charge of the company's advertising through that medium. In 1934 he became advertising manager for Sal Hepatica, Vitalis and Minit-Rub, but continued to supervise certain elements of the personnel work.

Whiteley Joins Assoc. Distributors

J. L. Younghusband announces the appointment of Jess H. Whiteley as director of sales, succeeding Leon I. Stein, who has returned to Philadelphia to assume the management of Sol Levy Co. In his capacity as head of his own company, Mr. Stein will continue to represent Associated Distributors and Dana perfumes in the Philadelphia territory.

Lamont, Corliss Dinner-Dance

Lamont, Corliss & Co. held its twenty-fifth annual banquet and dance at Hotel Roosevelt, New York, January 8. About 300 members of the company attended.

Slapin Appointed

Philip Slapin has been appointed sales director of Standard Synthetics, Inc., New York. Mr. Slapin will call on the trade in New York City, New Jersey, Philadelphia and Baltimore.

Moffett Drug Company Formed

The Moffett Drug Co., Inc. has been formed by Elias Malkin and I. S. Fankuchen, who have resigned as eastern representatives for Miller "Emdee" Laboratories. The new company which has offices at 345 Fifth Ave., New York, and a laboratory in Newark, N. J., will specialize in the manufacture of private label drug and cosmetic products with special emphasis on vitamin capsules. Mr. Malkin is president and Mr. Fankuchen is vice-president and treasurer of the new concern.

Hoyt Joins Evans

Evans Chemetics, Inc., New York, has announced that Neldon Hoyt has joined the company as production manager. Mr. Hoyt was formerly production manager for Allied Products Co., Suffern, N. Y.

NELDON HOYT

Sterling Vice-Presidents

Election by the board of directors of six divisional vice-presidents of Sterling Drug Inc., has been announced by James Hill, Jr., president. They are: Joseph D. Bohan, Centaur Division, Rahway, N. J.; Maxwell R. Hott, Dr. W. B. Caldwell Division, Monticello, Ill.; James N. Cooke, Cummer Products Division, Bedford, O.; Alfred J. Burns, and Robert R. Harsell, Charles H. Phillips Division, New York; and David H. Williams, R. L. Watkins Division, Lowell, Mass.

On December 31, Sterling Drug absorbed sixteen of its wholly owned domestic subsidiaries in order to simplify the company's corporate structure, and a number of new divisions were created.

Mr. Bohan joined the Centaur Co. in June, 1932, as export manager, later becoming vice-president and general sales manager. Previously he was with the export division of the Kolynos Co., New Haven, which he served from 1923 to 1932. From 1935 to 1942, he was chairman of the foreign trade section of the Proprietary Association, and is now chairman of the association's national affairs committee.

Mr. Hott joined Dr. W. B. Caldwell, Inc. in January, 1917 and, with the exception of service in the first World War, has been with the company ever since. Dr. Caldwell assisted at Mr. Hott's birth January 16, 1897. He was educated at the University of Chicago and the University of Aix Marseilles.

After attending Choate School and Princeton University, Mr. Cooke was manager of sales of Monroe Chemical Co., Quincy, Ill. In 1935 he was named general manager of Wells & Richardson Co., Burlington, Vt. When Sterling Drug acquired Cummer Products Co. and the Molle Co. in 1940, he was transferred to Bedford, O., as manager of these subsidiaries.

Mr. Burns has been connected with the Charles H. Phillips Chemical Co. for the past nine years. He started as sales representative, becoming district sales manager in New York in 1935. Four years later he was appointed promotion manager. He attended Rutgers University, Alfred University, and New York law SchooL. He first worked for the New York Telephone Co. and later for the Nestle Co., where he remained until becoming associated with the Charles H. Phillips Co.

Mr. Harsell attended the New Jersey College of Pharmacy and began his career as a drug store operator in Elizabeth, N. J. In 1917 he joined Roebler & Keubler, Newark, but this association was interrupted by eleven months' service as a sergeant with the 29th Division in France. After the war, he became a salesman for the Bayer Co., Inc. in New York, remaining in this capacity from 1919 to 1927, when he was made associate credit manager. In 1928, he became associated with the Charles H. Phillips Chemical Co. as assistant to the manager and in 1935 he was named vice-president and sales manager.

Mr. Williams began his career as a public accountant and first became associated with the R. L. Watkins Co. in 1933 as office manager. In 1940 he was made sales manager, and a year later was promoted to vice-president.

BAYONNE COMPANY
INCORPORATED
404 FOURTH AVENUE, NEW YORK, N. Y.
TELEPHONE: MURRAY HILL 5-0250-1-2
BAYCO
BC
INC.
Aromatic Chemicals-Essential Oils

Brewster Heads Stearns Sales

The appointment of Rafael C. Brewster as general sales manager in charge of sales and advertising of Frederick Stearns & Co., Detroit, has been announced by Erwin F. Fauser, president.

Mr. Brewster has been sales director for E. R. Squibb & Sons, Lentheric, Inc., House of Westmore, Inc., and Canada Dry Ginger Ale, Inc. He has also been associated with two advertising agencies and the staff of Cosmopolitan Magazine.

Merck Safety Record

The annual safety dinner of Merck & Co.'s employees was held in Elizabeth, N. J., January 27 to honor those members of the organization responsible for safety measures. It was announced that disabling or severe accidents at the plant declined 70 per cent. to 0.47 during 1942.

As compared with the average chemical plant, Merck & Co., Inc. lost 3.66 hours for every million manhours of work contrasted with a percentage of 9.5 hours lost for the chemical industry as a whole. The rate of severe accidents of 0.47 compares with a rate of 1.30 for the entire chemical industry.

George W. Merck, president of the company, presented a plaque to workers of Factory 22 who worked the greatest number of manhours without a disabling injury.

Container Co.—Continental Can

The merger of Container Co., Van Wert, Ohio, with Continental Can Co., New York, has been completed. C. E. Eggers is vice-president and L. L. Morris is secretary of the company which moved to Van Wert from Toledo in 1928.

Merck Labor Management Committee

Merck & Co., Rahway, N. J., has announced the formation of a labor-management committee whose purpose will be to stimulate war production in accordance with the policy of the War Production Board. It will encourage everyone in the organization to devote his work, thought and life to victory, and participated actively in the ceremonies of award of the Army-Navy "E" to Merck & Co., Inc., February 9.

The formation of the new labor-management committee is a wartime measure and in no way changes the relationship between the company and the employees' organization.

Haskell—U. S. I. President

Directors of U. S. Industrial Alcohol Co. have elected Charles S. Munson, chairman of the executive committee and Glenn L. Haskell, president. Mr. Munson was formerly president of the company and Mr. Haskell was executive vice-president.

Mr. Munson was born in Woodbury, Conn. in 1886 and was graduated from Yale University in 1912. That same year he joined the Amoskeag Manufac-

GLENN HASKELL

turing Co. During World War I, he served with the Chemical Warfare Service and in 1918 joined the Cuban Air Products Corp. In 1920 he was elected president and director of National Carbide Co., an Air Reduction subsidiary, becoming also a vice-president and director of the latter concern of which he is now president. He was elected president and a director of U. S. Industrial Alcohol in 1932.

Glenn Leach Haskell, the new president of U. S. Industrial Alcohol, was born in Chicago in 1883 and began his business career in 1900 with American Distilling Co., Pekin, Ill. He joined U. S. Industrial Alcohol Co. in 1921 and was western sales manager at Chicago and later general sales manager at New York.

In 1927 he was made vice-president in charge of sales. He has been first vice-president as well as a director of the company for many years.

Hagenah—Schering Chairman

The Alien Property Custodian has announced that William J. Hagenah, Chicago, has been elected chairman of the board of the Schering Corp., Bloomfield, N. J. At the request of the Alien Property Custodian, Mr. Hagenah has resigned as president of the Public Utility & Service Corp., Chicago, a post which he had held since 1938.

Toilet Requisites Awards

BEAUTY FASHION, retail perfume and cosmetic magazine, has announced that the Toilet Requisites Awards for 1942 have been presented to Yardley, Inc. for merchandising policy; to Revlon Products Corp. for promotion of Mrs. Miniver Rose; to Coty, Inc. for advertising, and to Charles of the Ritz for packaging Spring Rain.

These awards have been presented each year for several years in an effort to encourage the maintenance of a high standard of merchandising practices in the perfume and cosmetic industry. The Jury of Award was composed of six well-known department store buyers.

Fritzsche Entertains With Movies

F. H. Leonhardt, president of Fritzsche Brothers, Inc., New York, was host to several hundred customers and guests on two separate occasions the last week in January when he presented the latest in a series of colored motion pictures taken by Dr. Ernest Guenther, the firm's chief research chemist, featuring "Essential Oils and their Production in the Western Hemisphere."

The films and accompanying talk by Dr. Guenther covered his most recent surveys of West Indian, Mexican, Central and South American essential oil production, in addition to a special film devoted to essential oils produced in the United States, and attempted to show the progress now being made by Western Hemisphere producers in supplying our increasing needs of essential oils.

Both presentations were held in the Grand Ballroom of the Hotel New Yorker. The first on Monday, January 25, was primarily for the soap, perfume, cosmetic and allied trades, while the second was for the food, drug, beverage and sweet goods manufacturers and was presented Thursday, the 28.

Dr. Guenther's talk and pictures were preceded by a word of welcome both by Joseph A. Huisking, vice-president of Fritzsche Brothers, Inc., and by Mr. Leonhardt whom he introduced.

SaVoie to Givaudan Sales

Gertrude M. SaVoie was transferred from the technical service laboratories to the sales department of Givaudan-Delawanna, Inc., as of January 1. She has been with the organization for the last ten years and is thoroughly familiar with perfumes and cosmetics through her work as laboratory technician. Miss SaVoie's primary duty will be to serve

as perfume and cosmetic consultant to women stylists, packaging experts and sales consultants in the employ of toilet goods manufacturers.

Commercial Solv. Advances Sliger

H. B. Sliger, manager of the eastern sales division of Commercial Solvents Corp., New York, has been made assistant general sales manager for the company. O. R. Brunkow is general sales manager. In addition to his duties as manager of the eastern sales division, Mr. Sliger has been directing the activities of the central sales division since its manager, Lt. J. V. O'Leary entered the service. R. L. Hutchins is district sales manager in New York.

Ball Brothers Buys Aridor

The Aridor Co., Chicago, has announced that ownership of the company is now held by Ball Brothers Co., Muncie, Ind. The Aridor Co. will continue to function as an independent unit in the manufacture of caps. No change in management is contemplated. Colonel R. G. Peck remains as president and R. G. Peck, Jr., as vice-president and sales manager.

American Home Buys Canadian Firm

The capital stock of Ayerst, McKenna & Harrison, Ltd., manufacturer of biological, hormone, vitamin and other pharmaceutical products, principally in Canada, has been acquired by American Home Products Corp. American Home gave in exchange 24,000 shares of its own capital stock and $930,000 cash.

Standard Brands Consumer Vitamins

Standard Brands, Inc., has reorganized its pharmaceutical division and is entering the drug field with advertised consumer items, the first of which is Stams, a new multi-vitamin and mineral tablet. The reorganized pharmaceutical division is under the management of Charles L. Bowman. John LaWare, formerly in charge of bulk vitamin sales in Chicago, has become sales manager, bulk products. John W. Clissold, formerly in charge of bulk products on the Atlantic coast, has become sales manager of consumer products.

Stams is marketed through chains and service wholesalers in the drug field and the company expects to widen distribution to a national basis in a short time. Mr. Bowman has announced that other pharmaceutical products will be added to the drug line in the near future.

People

Lt. Sheffield Advanced

Lt. T. C. Sheffield, formerly western manager of New England Collapsible Tube Co., has been appointed aide-de-camp to Brig. Gen. Arnold Krogstad, Commanding General 5th District U. S. Army Air Force Technical Training Command. Lt. Sheffield's advancement has been rapid since he entered the service.

LT. T. C. SHEFFIELD

He was graduated from Officers Training School at Miami Beach, Fla., in August 1942. He was immediately appointed to the Officers Training School Staff, as an instructor. After teaching military subjects for several months, he was made adjutant and supply officer in one of the technical school squadrons in Miami Beach. Lt. Sheffield continued in this capacity until his new appointment as aide-de-camp to Brig. Gen. Krogstad.

Shaw in Army

George F. Shaw is on leave of absence from his duties with Henry K. Wampole & Co., Philadelphia, for the duration and is now serving as a captain in the Signal Corps of the U. S. Army.

Herbert Rubin in Signal Corps

Herbert Rubin, president of Rubicon, New York, left January 29 to enter the Signal Corps as a radio technician. He had been an enlisted member of the Reserve since last June.

Mr. Rubin, a graduate of Dartmouth College and Columbia Law School, resigned as associate buyer of Gimbel Brothers, New York, in 1936 to establish his own business. He had formerly been connected with R. H. Macy & Co. and was at one time chairman of the toilet goods committee of the National Retail Dry Goods Association.

During his absence in the army the management of Rubicon will be taken over by E. M. Davis, formerly accountant for Gotham Silk Hosiery Co., and Mrs. Herbert Rubin.

Dilworth Now Captain

John R. Dilworth, who resigned as assistant general sales manager of Anchor-Hocking Glass corporation to accept a commission of first lieutenant in the U. S. Army Air Corps, has been advanced to the rank of captain. Mr. Dilworth has been in foreign service for several months.

Harry Teres Enlists

Harry Teres, sales manager of Rubicon, New York, enlisted January 4 in the tank demolition unit and is now stationed at Camp Bowie, Texas. His position will be kept open for him until after the war and, in the meantime, the duties of sales manager will be shared by Edward Davis and Irving Strouse. Mr. Davis has been with the company for two years and Mr. Strouse joined it last November after fifteen years as a publicity agent. More recently he has been writing and producing radio shows.

Dorothy Smith Marries

Dorothy Smith, daughter of Mr. and Mrs. John Lawrence Smith, was married to Lieutenant Francis Monroe Campbell, U. S. Naval Reserve, on February 12, at St. Francis Xavier Church, Brooklyn, N. Y. Mr. Smith is vice-president of Chas. Pfizer & Co., New York.

A Son To The Garlicks

T. H. Garlick, sales manager of Seeley & Co., Inc., New York, and Mrs. Garlick have announced the arrival of a son, Bruce Kinnear. The baby was born at St. Vincent's Hospital, New York, January 19 and Mr. Garlick claims that he is the future national tennis champion

Elizabeth Arden Marries

Mrs. E. Graham Lewis (Elizabeth Arden) was married December 30, 1942, in All Souls Unitarian Church, New York, to Prince Michael Evlanoff.

Financial

Bristol-Myers Report Net Earnings

Bristol-Myers Co. and its subsidiaries report for the three months ended December 31, 1942, net earnings of $645,748, and for the year ended Decem-

ADVERTISEMENT—*This entire page is a paid advertisement.* *Prepared Monthly by U. S. Industrial Chemicals, Inc.*

U.S.I. CHEMICAL NEWS

February ★ A Monthly Series for Chemists and Executives of the Solvents and Chemical Consuming Industries ★ 1943

Dibutyl Phthalate Good Softener for Perbunan Rubber

Imparts Excellent Resistance To Cold and Gasoline Immersion

ELIZABETH, N. J. — Dibutyl phthalate is rated among the most satisfactory softening agents for the compounding of Perbunan type synthetic rubber, it is indicated by the reports of research workers here.

The effect of a number of softeners was studied from the standpoint of response of the compounded rubber to subzero temperatures, and also of contact with petroleum oils. As a result of these tests, it was found that dibutyl phthalate is one of a small group of ingredients which are effective in preventing hardening at low temperatures.

Effect of Petroleum

Since Perbunan is largely used for making hose, gaskets, and other parts subjected to contact with petroleum oils, behavior of the softener under these conditions is a matter of extreme importance. Undue extraction of the softener would result in marked shrinkages in volume of the compounded part. From this standpoint also, dibutyl phthalate shows good resistance to immersion in gasoline, as measured by volume change, tensile strength retention, and low increase in hardness.

Drug Trades Section to Hold Dinner on March 4

The 18th Annual Dinner sponsored by the Drug, Chemical, and Allied Trades Section of the New York Board of Trade will be held at the Waldorf-Astoria in New York on Thursday, March 4.

Following the precedent established last year, it has been announced that a substantial donation to a war charity will be made from the proceeds of the dinner. The cooperation of the industry in maintaining a high level of attendance at the dinner will help to make the contribution as large as possible.

Sulfa Drug Films Studied For Burns, Cuts, Surgery

BALTIMORE, Md.—Translucent films containing sulfa drugs are undergoing study here as a surgical dressing for burns and cuts and for the treatment of wounds. Preliminary reports indicate that the films are effective in preventing infection.

The films are prepared by making an emulsion of 3% sulfadiazine or sulfanilamide, 2.5% methyl cellulose, 3% triethanolamine, and 0.5% sorbitol with ethanol or acetone. This emulsion is sprayed on a smooth glass sheet, from which it is stripped off in the form of a film. The film is applied after preliminary cleaning of the affected area.

New Pittsburgh Address

U.S.I.'s Pittsburgh Office is now located in the Fulton Building, 107 Sixth Street.

New Source of Glycerol Opened By Process Developed by U.S.I.

Fermentation Procedure is Key to Vitally Needed Supplies For Manufacture of Explosives and Other Urgent Requirements

In view of the current importance of glycerol as a raw material in the manufacture of nitroglycerine for explosives, the development by U.S.I. of a commercially practicable method for producing this vital material by fermentation of molasses assumes outstanding interest. Pilot plant operations have demonstrated the feasibility of the technique, and commercial production is soon expected to alleviate the critical demand for glycerol.

Glycerol (more commonly known as glycerine), discovered in 1779 by Karl W. Scheele, is one of the oldest and most widely used chemicals. The value of glycerol rests on its physical properties rather than on its chemical constitution although it is employed chemically to make certain very important compounds. Of the physical attributes of glycerol, the most outstanding is its strong affinity for water. This has led to its employment as a humectant and plasticizer, and since it is non-toxic, it can be used in cosmetics and foodstuffs where an agent for the holding of moisture is necessary to keep the products in condition. Glycerol is a remarkably good solvent, comparing in this respect with water and ethanol. Many antiseptics and essential oils are soluble in glycerol, and this solvent property, combined with the fact that it is non-toxic, gives the compound its unique place in the manufacture of pharmaceutical preparations and as an ingredient of food products.

This article lists some outstanding uses of glycerol in military and civilian applications. A much more detailed listing is given in Bulletin GU, which is available without charge from U.S.I.

Manufacture of Resins

In recent years glycerol has taken an important place in the plastic field as a constituent of alkyd resins. These resins (phthalic anhydride and glycerol) are made in a variety of ways. Glycerol and resin are combined to make the well-known ester gums widely used

(*Continued on next page*)

New Method Described for Making Chroman Compounds

MINNEAPOLIS, Minn. — A novel process for making tocopherol-like chroman compounds has been revealed in a patent granted to an inventor here. Since alpha-tocopherol is Vitamin E, these new compounds, apparently of a similar character, are expected to have medical and biological applications.

Key to the new process lies in the preparation of the primary intermediate. A halo-alkyl derivative of a diether of hydroquinone is first prepared. This compound is then used to alkylate a *beta*-keto ester, preferably ethyl sodium acetoacetate, resulting in the formation of the primary intermediate.

Ethyl sodium acetoacetate is produced by U.S.I.

Non-Discoloring Adhesive Made with Aid of Urethan

WESTFIELD, Mass. — Discoloration of the adhesive on envelope flaps can be prevented by means of a novel formulation involving the use of urethan, it is claimed in a patent granted to an envelope maker here.

The discoloration is caused, according to the patent, by chemical reaction between degraded protein in the paper and reducing sugars in the adhesive. It can be prevented, it is claimed, by decreasing the reducing sugar content. The fluidity necessary to apply the adhesive to the envelope, ordinarily obtained by high sugar content, is achieved by addition of a carbamic acid ester, such as urethan.

The manufacture of nitroglycerine for explosives is one of the most important applications of glycerol. Procedure developed by U.S.I. will make additional supplies available for this and other purposes.

ADVERTISEMENT—*This entire page is a paid advertisement.*

February ★ **U.S.I. CHEMICAL NEWS** ★ 1943

Applications of Glycerol

(*Continued from preceding page*)

in varnishes. Glycerol is an important ingredient in adhesives, acting as a means of controlling the flexibility of these products so as to give them the maximum of strength under the conditions of use. A similar application is found in certain cements such as the familiar litharge-glycerol combination used as a plumber's cement and a cement for aquaria. Here advantage is taken of the readiness with which glycerol combines with the lead salt used in the cement to form a hard insoluble compound.

Plasticizing Cellophane

One of the outstanding uses of the compound in modern technology is the employment of glycerol in plasticizing cellophane. It is only necessary to consider how widely used this material is to realize the important part that glycerol plays in our everyday affairs. In cellophane the glycerol exists in the form of a solution of approximately 60% strength. About 25% of the weight of the finished product is made up of the plasticizer. Without a suitable softening agent, the cellophane film is brittle and useless.

Lubricating Properties

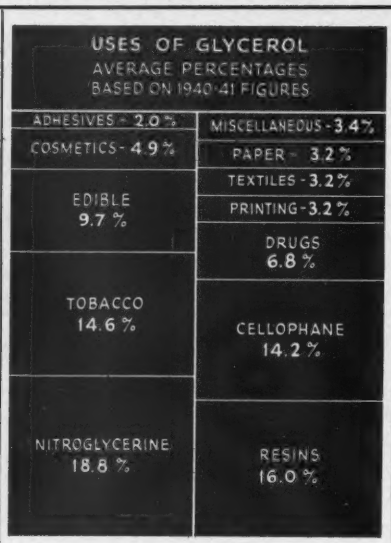
Other widespread uses of glycerol rest on its lubricating properties. Certain machinery used in processing foods must be lubricated with a tasteless and non-toxic lubricant. Glycerol fits these specifications well and has in addition a high degree of stability under the conditions existing in bearings.

In textiles, glycerol has uses which depend largely on its properties as a lubricant. It thus renders fabrics soft and facilitates weaving, and since it is so readily miscible with water, it aids in dyeing and printing operations on cloth.

Another major use of glycerol is in tobacco. Here the hygroscopicity of the material comes into play to keep the tobacco moist and thus to hold it in condition over long periods of time during which the tobacco without such protection would dry out completely. It is difficult to find a substitute for this particular use of glycerol.

Making of Explosives

The most important purely chemical use of glycerol is as a raw material in the manufacture of nitroglycerine for explosives. Modern ammunition requires precisely formulated propellants and nitroglycerine has a place of major importance as an ingredient in these propellants. Since the ballistics of long range



guns is based on the propellant, the propellant formula cannot be changed without revising the data on which the aiming of the guns is based. The employment of nitroglycerine in powders overshadows all other uses at the present time.

An approximate breakdown of the amounts of glycerol employed in various fields is shown in the accompanying chart. Four uses, nitroglycerine manufacture, resin manufacture, tobacco conditioning and cellophane plasticizing account for over 60% of all the glycerol produced. The figures in the graph are averaged from 1940 and 1941 statistics.

The use of glycerol showed an increase of approximately 33⅓% from 1940 to 1941, and expanding military use, plus the necessity for adequate stock piling, makes a shortage of this vital chemical a possibility to be reckoned with during the coming months. Substitutions are possible to some extent and certain uses can be curtailed, but the restriction of available glycerol to explosive manufacture and its consequent elimination from all civilian uses poses a very difficult problem due to the widespread use of this versatile chemical.

This brief review of the major applications of glycerol indicates the importance of developing new sources of supply. The fermentation procedure developed by U.S.I. to meet this demand will be discussed in a second article on glycerol, which will appear in the March issue of U.S.I. CHEMICAL NEWS.

TECHNICAL DEVELOPMENTS

Further information on these items may be obtained by writing to U.S.I.

New adhesives, made from a vegetable base, are said to compare in range and flexibility of action with animal-base adhesives. According to the maker, they can be used undiluted or mixed with water, to give firm adhesion in combinations of paper, cardboard, fabrics, leathers, and imitation leathers. **(No. 660)**

U S I

A sponge rubber substitute can be vulcanized directly to such surfaces as metal and plastics, and has flex-cracking resistance which improves at lower temperatures, it is reported. In many other respects, properties are said to be very similar to those of natural rubber. Material is immediately available for many war applications. **(No. 661)**

U S I

New gaskets made from solution-proof kraft paper are described as suitable for replacements for rubber gaskets in drums, pails, bungs, and spouts. They are said to have been tested for the transportation of all liquids except corrosive acids. **(No. 662)**

U S I

Drying oil substitutes can be produced by fractionation of domestic oils, research work indicates, and commercial production is expected soon. It is reported that the process is adaptable to the making of special fractions for specific purposes. **(No. 663)**

U S I

A suspension agent is reported to aid in preventing the settling or caking of pigments used in luminous paints. It is said that the product can be used in high concentrations to form thick supporting gels. **(No. 664)**

U S I

A lintless filter paper is described as having high retention qualities. Maker says that it is supplied washed with nitric acid, and that it is primarily suitable for the filtering of intravenous and subcutaneous injectibles. **(No. 665)**

U S I

Agitator tanks are now being constructed from wood, including cypress, redwood, pine, fir, oak, and poplar, it has been announced. Storage tanks up to 100,000 gallons capacity are also being produced. The wood tanks are expected to be useful to the processing industries. **(No. 666)**

U S I

Pure nickel foil is now being produced on a small scale in widths up to 16 inches and thicknesses from 0.00025 to 0.0015 inch, it is reported. Possible applications are seen as container linings, diaphragms, and wrappings. **(No. 667)**

U S I

Analytical sets now being supplied include the necessary apparatus and chemicals for the testing of plating solutions. One set is designed for determining total and free sulfuric acid; a second for total and free chromic acid. **(No. 668)**

U S I

Imitation perfume oils developed by one supplier are said to include products that simulate the following natural oils: cassia, bergamot, cinnamon, citronella Java, geranium, lavender, lemongrass, peppermint, and sassafras. **(No. 669)**

U.S.I INDUSTRIAL CHEMICALS, INC.

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*Solox D-I De-icing Fluid

*ANSOLS
Ansol M
Ansol PR

ACETIC ESTERS
Amyl Acetate
Butyl Acetate
Ethyl Acetate

OXALIC ESTERS
Dibutyl Oxalate
Diethyl Oxalate

PHTHALIC ESTERS
Diamyl Phthalate
Dibutyl Phthalate
Diethyl Phthalate

OTHER ESTERS
*Diatol
Diethyl Carbonate
Ethyl Chloroformate
Ethyl Formate

INTERMEDIATES
Acetoacetanilide
Acetoacet-ortho-anisidide
Acetoacet-ortho-chloranilide
Acetoacet-ortho-toluidide
Acetoacet-para-chloranilide
Ethyl Acetoacetate
Ethyl Benzoylacetate
Ethyl Sodium Oxalacetate

ETHERS
Ethyl Ether
Ethyl Ether Absolute—A.C.S.

OTHER PRODUCTS
Acetone
Collodions
*Curbay B-G
*Curbay Binders
*Curbay X (Powder)
Ethylene
Ethylene Glycol
Nitrocellulose Solutions
Potash, Agricultural
Urethan
*Vacatone

*Registered Trade Mark

ber 31 earnings of $2,464,338. This is equivalent to 97 cents per share for the quarter and $3.69 per share for the year.

The above earnings are net after all charges, taxes, (including post-war refund of excess profits taxes) and a provision of $250,000 for future losses on inventories, commitments and post-war adjustments. Normal income, surtax and excess profits taxes for the year amounted to $4,692,744 after deducting a post-war credit of $373,414.

Dow Earns More

Dow Chemical Co. reports for the six months ended November 30, 1942, a net profit of $4,677,108, equal to $3.62 a share on the common stock. This compares with a profit of $4,052,370, or $3.11 a share, in the corresponding six months of 1941.

Hooker Net Higher

Hooker Electrochemical Co. reports for the year ended November 30 a net profit of $1,442,390, equal to $4.13 a share. This compares with a net income of $1,182,511, or $3.35 a share for the year ended November 30, 1941.

Lehn & Fink Earnings Steady

Lehn & Fink Products Corp. report for the six months to December 31 a net profit of $350,948, equal to 87 cents each on 400,000 common shares. This compares with a net of $348,387, or 87 cents a share for the last six months of 1941. During the 1942 period the provision for federal income taxes was $224,700, against $184,000 for the 1941 period. The company is not considered liable for excess profits, according to the report.

McKesson Earnings Down

McKesson & Robbins, Inc. reports for the six months ended December 31, 1942, a net income of $2,172,099, after interest and after provision of $4,905, 721 for Federal taxes, before applying $395,285 post-war credit. This is equivalent to $1.20 per share on the common stock, and compares with a net profit of $3,957,544, after interest, provision of $750,000 for Federal taxes and a provision for contingencies of $1,000,000 earned in the last six months of 1941.

The company's net sales for the six months ended December 31, 1942 were $120,479,456, an increase of 17.6 per cent. over the $102,451,571 in the same period of 1941.

Consolidated net profit for the three months ended with December was $1,478,535, after interest, and after provision of $2,931,464 for Federal taxes, before applying $395,285 post-war credit. This is equivalent to 83 cents a share.

Noxzema Net Down

Noxzema Chemical Co. reports for 1942 a net income, after $432,250 provision for income and excess profits taxes, of $198,149, or 51 cents a share. In 1941 the net income was $233,096, or 59 cents a share, after $210,000 tax deductions. Sales for 1942 were $2,423,795, against $2,201,008.

Obituaries

Henry J. Bowerfind

Henry J. Bowerfind, president of the Fort Wayne Drug Co., Fort Wayne, Ind. and honorary president of the National Wholesale Druggists' Association, died January 28. He was sixty-eight years old.

Mr. Bowerfind was born in Adrian, Mich., and was graduated from the University of Michigan as a pharmaceutical chemist in 1896. When the Fort Wayne Drug Co. was organized in 1899, he became manager of its sundries department. In 1901 he was elected secretary of the company and general manager. In 1920 he became vice-president and in 1932, president.

He was vice-president of the National Wholesale Druggists' Association in 1931 and served as a member of its board of control from 1924 to 1927.

Edwin P. Dodge

Edwin Parker Dodge, vice-president of the Mu-Col Co., Buffalo, N. Y., died following an operation at the Lockport City Hospital.

Mr. Dodge was one of the five young men who formed the company in 1902. At that time he was connected with the Hall & Lyon Co., Providence, R. I. He was present at many of the conferences of George C. Lyon and Louis K. Liggett when the formation of the United Drug Co. was being considered.

When the Cahoon-Lyon Drug Co. opened its store in Buffalo about forty years ago, Mr. Dodge was its manager. Later he opened a drug store in that city under his own name. He left the retail field to become a field representative for the DePree Co., Holland, Mich., for several years until his retirement four years ago.

J. Frederick Hartlieb

J. Frederick Hartlieb, president of Continental Can Co., died in New York, January 26, after a month's illness. He was sixty-five years old.

Mr. Hartlieb joined Continental Can Co. as assistant to the president in 1927. He became vice-president in 1928 and a director in 1929. He was made a member of the executive committee in 1934 and executive vice-president in 1936. His election to the presidency of the company followed in 1940.

John A. Hook

John A. Hook, founder and president of the Hook Drug Co., died in a hospital in Indianapolis February 7 after an illness of several months. His age was sixty-two.

Mr. Hook was born in Cincinnati. His parents took him to Indianapolis in his youth. He attended schools there and was graduated from the Cincinnati School of Pharmacy in 1900.

The drug chain which he founded now operates fifty-three stores, twenty-six in Indianapolis and twenty-seven in eighteen other cities in Indiana. At one time the company operated several stores in Kentucky.

H. H. Horton

Hugh Hill Horton, president and treasurer of the Strother Drug Co., Lynchburg, Va., died January 9 at the age of sixty-eight. Mr. Horton had been associated with Strother Drug Co. for forty-four years and had been president for ten.

Charles E. Ising

Charles E. Ising, president and founder of E. C. Ising Corp., Flushing, N. Y., died at Lennox Hill Hospital, New York, from a heart attack, January 26. He was sixty-three years old.

Mr. Ising was born in Germany and came to this country as a young man. All of his business life was spent in the essential oil business. In 1909 he founded his own company, C. E. Ising, and in 1918 the firm was incorporated as the C. E. Ising Corp.

About twelve years ago Mr. Ising did some research work in the distillation of flower oils, particularly rose and orange blossom, at Claremont, Calif. His laboratory, stills and equipment are still there and Mr. Ising had hoped to be able to return to California to continue the work.

He is survived by his widow who is vice-president of the company.

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Benzoic Acid U. S. P.	Potassium Ammonium Phosphate
Caffeine U. S. P.	Potassium Phosphate
Dicalcium Phosphate	Saccharin U. S. P.
Chloral Hydrate U. S. P.	Salicylates
Chloramine-T U. S. P.	Salol U. S. P.
Glycerophosphates	Sodium Benzoate U. S. P.
Magnesium Phosphates	Sulfanilamide U. S. P.
Methyl Salicylate U. S. P.	

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Mol. Wt. 172.20

Standard Forms: 30—80 mesh
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Specifications: White crystals or powder; assay (dry basis) 99.5% min.; m. p. 165.0°C. min.; solution in N/2 HCl (2:30), clear; ash 0.05% max.; chlorides (as HCl) 0.014% max.; sulfate (as H_2SO_4) 0.04% max.; conforms to U. S. P. test for heavy metals.

MONSANTO CHEMICALS

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F.T.C. ACTIVITIES

Baume Ben-Gay

False advertising of "Baume Ben-Gay" is alleged in a complaint against Thomas Leeming & Co., Inc., New York. The respondent recommends the product for external application in treatment of painful conditions of the body.

Representations which the complaint alleges are false, are that Baume Ben-Gay is a quick and effective treatment for pains of neuralgia and rheumatism, for muscular aches and pains, and for colds and associated discomforts; that it relieves local congestion accompanying colds, and assures fast and effective relief at the point of location of the source of the pain.

The complaint charges that neither the menthol nor the methyl salicylate contained in the product, when applied to the skin, will penetrate in sufficient quantities to provide any systemic relief. The use of the preparation, the complaint continues, tends to temporarily mask pain but it cannot relieve pain as it has no curative or remedial properties, its effect being limited to that of a counter-irritant, and any relief afforded will be temporary and the pain will again be fully apparent when the counter-irritant effect has ceased.

Weight-Reducing Candy

The Carlay Co., Chicago, and its president and treasurer, Carl A. Futter, are charged with misrepresentation of a candy product known as "Ayds," sold in connection with so-called weight-reducing plans and recommended as a treatment or cure for obesity.

Advertisements, the complaint alleges, falsely represent that Ayds and the so-called reducing plans present a new and easy way to reduce excess weight without diet or exercise; that the use of the candy product is important in the reducing plan and will curb or dull the appetite for fattening food; and that the respondents' plans will result in the loss of excess weight in an easy, pleasant way without the necessity of strict dieting.

Details of the plans are not revealed in advertising but in circulars enclosed in each package of Ayds and purchasers are thus led to believe that the only essential requirement to lose weight is the eating of a few pieces of candy before meals. The plans require a severely restricted low calorie diet in addition to Ayds, which is a caramel candy fortified by Vitamins A, B and D and minerals and designed to supply vitamin and mineral deficiency.

Ostrex Tonic

Ostrex Co., Inc., New York, distributing "Ostrex," and David Steuerman and Lillian Steuerman, trading as Steuerman Advertising Agency, New York, disseminating advertising of the preparation, are charged with misrepresentation.

The complaint charges that the respondents have disseminated advertisements representing: "Men, Women! Old at 40, 50, 60! Get Pep, Feel Years Younger, Full of Vim, Don't blame exhausted, worn out, run down feeling on your age. Thousands amazed at what a little pepping up with Oxtrex will do. Contains general tonics often needed after 40. * * *." Through these and other representations the respondents have represented the preparation as a competent and effective treatment and remedy for an exhausted, worn out, run down feeling and bodily weakness and that these conditions are not attributable to old age but are caused by body deficiencies of iron, calcium, phosphorus, iodine and Vitamin B_1. The complaint charges that these representations are false; that such conditions are ordinarily associated with old age and in a great majority of cases have no relationship to such body deficiencies and that the preparation does not contain general tonics and stimulants of such a nature and in such amounts as to correct subnormal conditions in persons over 40 years of age and does not and cannot cause them to feel younger and full of pep and vitality.

Face Lifting

Delmar M. Randall, trading as The Colran Institute, Houston, Tex., and Mervyon E. Randall, are charged with misrepresentation.

The respondents are engaged in the sale of an electrical device variously designated as "The Electric Facial Rejuvenator," "The Colran Electro-Lifter," and "The Electro-Lifter," together with cosmetics designated as "Cleansing Oil," "Contact Solution," "Special Cleansing Solution," and "Conditioning Oil," advertised as the "Colran Method of Face Lifting without Surgery."

The respondents have represented: "Surgery Eliminated! Face lifting can now be accomplished without surgery. The pain, discomfort, and possibility of ugly scars that have caused so many women to decide to grow old gracefully is no longer necessary." "The Skin is attached to the muscles. Sags and wrinkles and bagginess of the skin are due to relaxation and weakened condition of the underlying muscles to which it is attached. The Electro-Lifter rebuilds and strengthens these muscles through a natural form of exercise that automatically tightens and fills out the skin which is attached to these muscles, thus removing wrinkles and hollows and restoring firmness and natural contour to the face;" and "The results obtained by The Colran Method should last from three to five years."

The complaint charges that the representations are false and that face lifting cannot be accomplished without surgery. Sagging faces, loose, wrinkled skin and other signs of old age on the face and neck, the complaint continues, cannot be eliminated by use of the respondents' method.

Breosan Laboratories

Paul Sturzenegger, trading as Breosan Laboratories, Long Island City, N. Y., selling four preparations designated "Breosan Suppositories," "Breosan Solution," "Breosan Ointment" and "Breosan Lanolin," has stipulated to cease representing that Breosan Suppositories or the Breosan Treatment have any therapeutic value in the treatment of hemorrhoids other than that as an emollient palliative; that Breosan Solution is a prophylactic or an antiseptic, will cause wounds to heal without scars or promote the growth of new tissue, is not a drug or has any beneficial therapeutic effect in the treatment of wounds, abrasions, blood poisoning, boils, or other ailments enumerated in his advertisements, or that Breosan Ointment or Breosan Lanolin have any beneficial therapeutic effect in the treatment of wounds of many kinds, burns, chapped hands or similar ailments.

INDUSTRY'S BOOKS

Semimicro And Macro Organic Chemistry, A Laboratory Manual by Nicholas D. Cheronis, Chicago City Colleges, 388 pp., Thomas Y. Crowell Co., New York, Cloth, $2.75 .

The arrangement of the material in the manual is made according to the following plan: In the first part an attempt is made to introduce the students to the elementary technics, such as crystallization of solids, distillation of liquids, determination of boiling and melting points and of refractive indices, necessary for the preparation and properties of the simpler groups of organic compounds. The preparation of one or more compounds from each group serves to illustrate the general principles involved. This is followed by a systematic study designed to illustrate important group properties and variations of these among members of the same group. Beginning each experiment there is a brief introductory explanation relating the material of the experiment to the previous knowledge of the student and also orienting him to the work to be done. The latter part of the manual is devoted to compounds of greater complexity.

Germany's Master Plan: The Story of Industrial Offensive, by Joseph Borkin, Economic Adviser to Thurman Arnold's Antitrust Division of the Department of Justice, and Charles A. Welsh, Cartel expert for the Office of Price Administration, 357 pp., Duell, Sloan & Pearce, Inc., New York, $2.75.

An authoritative—and not pretty—picture of how German cartels laid siege to the economies of their prospective enemies by duping many of the essential industrial enterprises of the democratic nations into commercial Munichs, is painted in a new book which reveals for the first time how the enemy conquered by contract long before the war began The authors are two top-ranking government economists who played important roles in helping the government smash this devastating conspiracy—barely in time. Germany's grandiose plan for world conquest was divided into three major portions: military, political, and industrial. How was a poverty-stricken post-war Germany able to turn the victorious allies of World War I into the have-not nations? That is the theme of this book—and the story of cartels. Industry by industry, the authors name names and cite facts. The list of chapters read like a roster of the essential industries of the United States: "Coal, Oil and Firepower," "Mosquitoes, Malaria and Monopoly," "Plastics—the Test-Tube Metal," "Dyestuffs — the Kaleidoscope of War," "Tungsten Carbide—The Martial Diamond," "Magnesium—Metal of Mars," "Beryllium—The Magic Metal", "Drugs and Geopolitics," "Private Government and Industrial Munichs," to mention some of the chapter titles. The book closes on a warning note we must win the peace. The weakness of democracy lies not in its lack of planning, but in its tolerance of industrial oligarchy, the economic twin of Facism.

Textbook of Pharmacognosy, by Heber W. Youngken, A.M., Phm.M., Ph.D., Sc.D., Professor of Pharmacognosy and Biology, Massachusetts College of Pharmacy, Boston, 5th Ed., 1038 pp., Illus., The Blakiston Co., Phila., $7.50.

In this new edition, the results of many important investigations in the biological and chemical fields of pharmacognosy have been incorporated. Changes have occurred in some of the methods of production, in some of the commercial sources, and in many of the uses of organic drugs. During 1942 the U. S. Pharmacopoeia XII and the National Formulary VII appeared with numerous additions, deletions and changes in monographs of official drugs. Many changes in the names of species of plants yielding drugs and other economic products have been made as the result of revisions of the International Rules of Botanical Nomenclature adopted by the fifth and sixth Botanical Congresses. These advances and changes have all been duly considered during this revision and the book has been brought into conformity with current pharmacognostic thought and practice. Many new monographs and illustrations have been added. A number of vegetable crude drugs, oils and aromatic products, formerly imported from abroad, are being produced here on an increasing scale. In keeping with the trend in this field of pharmacognosy, cultural directions for a large number of drug and condiment plants have been introduced into the monographs. A new chapter on the therapeutic classes of drugs is presented in Part I. Contents: Part I. Morphologic Considerations of Drugs: Fundamental Considerations; Morphological Classification of Crude Drugs; Therapeutic Classes of Drugs. Part II. Taxonomic Consideration of Drugs: Drugs of Vegetable Origin; Drugs of Animal Origin; Microanalytical Methods.

Substitutes, by H. Bennett, Technical Director, Glyco Products Co., Inc., 225 pp., Chemical Publishing Co., Inc., Brooklyn, $4.

This is a handbook of substitutes and alternatives for chemicals, metals, fibres and other commercial products including a plan for choosing proper substitutes. Selecting the proper substitute is no easy task. Since no material has all the same properties as the material which it will replace, it cannot be expected that the replacement will yield a finished product possessing exactly the same characteristics as the original. A replacement, therefore, that will produce a finished product which will perform almost the same function as the original, without too great difference, is ordinarily considered satisfactory. This book lists such alternative materials as well as giving instructions on how such substitute materials may be selected.

The Theory of Emulsions and Their Technical Treatment, by William Clayton, D.Sc., F.I.C., Head of the Technical Development Department, The Metal Box Co., Ltd., London, 4th Ed., 492 pp., Illus., The Blakiston Co., Phila., $10.

This book presents a thorough study of emulsions with emphasis on their technical treatment and industrial application. The previous edition has been exhausted for several years since which time much valuable work on the general theory of emulsions has been done. Evidence of the importance now given to emulsions and related problems is seen in the inclusion of the electrical double layer and the oil/water interface. In the treatment of industrial emulsions the author presents a study of those emulsions which involve some special theoretical considerations and broad physico-chemical principles. Hence, the inclusion of bitumen emulsions (problems of breaking); biological emulsions (problems of interfacial effects and inversion); insecticides and fungicides (problems of wetting); milk and butter (the influence of the air/liquid interface), etc. Many important, original papers have been read, and the author has supervised a group study of academic and technical aspects of the bulk production of emulsions. The literature has been very thoroughly covered and the bibliographies greatly extended. A number of new illustrations and many useful tables are included. Contents: Surface Phenomena; Adsorption at liquid/liquid Interfaces; Dilute emulsions as oil hydrosols; Emulsifying agents; Properties of emulsions; Theories of emulsions; Dual emulsions and the inversion of phases; Emulsions in biological investigations; Miscellaneous emulsions; The preparation of emulsions—basic principles; The preparation of emulsions—technical operations; Demulsification; Physical measurements in emulsions. Appendices: Separation of technical emulsions, particularly crude oil-field emulsions; Summary of important patents since 1934.

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DRUG AND COSMETIC INDUSTRY
101 W. 31st Street New York, N. Y.

Standard Nomenclature of Disease and Standard Nomenclature of Operations, edited by Edwin P. Jordan, M.D., 1022 pp., American Medical Association, Chicago, $4.

The purpose of the system of classifying disease employed in this book is to present a logical clinical nomenclature. The Standard Nomenclature aims to include every disease which is clinically recognizable and to avoid repetition and overlapping. English terms in good usage are employed whenever possible in preference to Latin or Greek terms, although numerous exceptions occur, especially under diseases of the skin and of the eye. This nomenclature attempts to make clear the distinction between a disease and its manifestations. It has been designed primarily for clinicians since the clinical diagnosis is the source of all information on the prevalence and distribution of disease. There is no essential change in arrangement between this and previous editions of the Nomenclature and hence no serious difficulties should be encountered by those who have used previous editions. However, about thirty-five hundred additions, deletions and corrections have been made in individual diagnostic entries.

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The most practical hand filler for creams, lotions and liquids.

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Your Tablet Machines May Have To Last *for the Duration*

Your Stokes Tablet Machines are carefully designed and built . . . to give you long and economical service. We know of many that are still in use . . . after 25 years or more. We know of others in which neglect and abuse have caused needless wear and maintenance cost.

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To make your present machines last for the duration . . . they must be kept clean, well lubricated, and operated at no greater pressures than absolutely necessary.

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To help you instruct your men, especially your younger men, how to get maximum wear and service from tablet machines and punches and dies we have prepared an authoritative, pocket-size booklet which you will find most helpful.

We suggest you write for as many of these booklets as may be needed . . . to pass along to every man responsible for tablet machine operation and maintenance.

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F.J.Stokes TABLET MACHINES · PHARMACEUTICAL EQUIPMENT FJS Est. 1895

PRODUCTION FORUM

By FRANCIS CHILSON
Production Engineer

POWER PLANT CONVERSION

If you haven't already converted your steam plant from oil to coal, you had better do so in order to avoid the disastrous possibility of having your fuel supply cut off altogether. There is no doubt in my mind but that next winter or even before no fuel oil for industrial plants will be available. This situation may well come before this winter is over. An indication of the way the wind is blowing is seen in the fact that the Standard Oil Company is converting its Bayway Refineries to coal. If the largest producer of fuel oil switches its facilities to coal, you can bet your life that it was done because this outfit knows how serious the condition really is. One of the officials in the administration told me not long ago that regardless of the war we are depleting our natural oil reserves at too rapid a rate and that the return to coal for steam and heating purposes will soon become mandatory throughout the country and that even after the war the consumption of oil for such purposes will continue to be illegal.

Of course, some of the rumors and some of the acts, like that of the Standard Oil as mentioned above, may be considered propaganda to cover up the lack of foresight of the Washington Administration. But regardless of the rumors, I don't think it is safe not to convert. In most areas coal is cheaper anyway than fuel oil.

If you must convert, what form of apparatus should you employ? Small operators have no problem because boilers under two hundred horsepower can, if necessary, be hand fired. Larger boilers should be fired automatically. Two types of equipment are available for this purpose. One type consists of the various forms of automatic stoker. The other type utilizes pulverized coal which is blown into the firebox by means of a fan. The equipment consists of a high-speed pulverizer driven by means of a steam turbine. A blower, also turbine driven, sucks the pulverized coal from the hammermill and blows it into the fire box. Of the two types, I prefer the latter because less cumbersome equipment is required, and combustion is more nearly perfect. Combustion is indeed very much like that in an oil burner because the finely pulverized coal is so thoroughly mixed with air that combustion is instantaneous. In the latter system, you have to deal with a more acute problem of soot and fly ash, but this problem can be licked also through the installation of a soot precipitator.

The fuel oil shortage may indeed give you the opportunity to make an exhaustive study of your power costs generally. You may find as I did in a recent instance that your instruments for recording Co_2, stack temperatures and draft, are inadequate. While you are at it, have a look at the condition of the flues. Look into the matter of boiler insulation, steam pipe insulation, and investigate the whole condensate return system. Follow your steam lines through the plant and check steam leaks. It is surprising how costly small leaks are. For instance, if you find a leak one-tenth of an inch in diameter, the lost steam will cost annually about $250 a year, assuming your fuel cost is $4 a ton and your steam pressure is one hundred pounds. You can figure your steam losses accurately by using Napier's formula, which is based on the assumption that one pound of fuel will evaporate six pounds of steam. First, list all leaks and measure the size of the opening in each case. Then square the diameter of the total of the openings in inches, multiply by the absolute steam pressure in pounds per square inch, multiply the product by the cost of fuel per ton in dollars, and then by 29.2. The result will be your loss in dollars per year. If you have many small leaks, the calculation will knock you right out of your chair.

While you are at it, you may as well investigate the question of whether or not it will pay to generate your

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—helping the other fellow out

It's mighty hard to say, "Sorry we can't supply you" — especially when one appreciates how badly the other fellow needs the equipment he's after . . . So when we went all out on armament work, we devised a plan to obtain used machines of our make for those in urgent need of additional equipment.

Our Wrapping Machine Procurement Service

We neither buy nor sell the wrapping machines procured through this service — we merely place the prospective user in touch with another manufacturer who can sell or lease him the type of machine required.

One well-known company recently secured ten machines in this way. Others have obtained from one to four machines. And the service has proved helpful not only to manufacturers producing civilian goods, but to those on war work who could not wait for us to build new machines. . . . For example, ration bars made by a well-known chocolate bar manufacturer are now being wrapped on machines formerly used by a soap manufacturer. Army K rations, made by food manufacturers, are being wrapped on machines which were bought or leased from makers of cigarettes, paper specialties, cosmetics, etc.

We believe this typifies the spirit of cooperation which obtains in American industry today. . . . For we are sure that those manufacturers who have sold or leased their machines to others have done it chiefly to "help the other fellow out" — and that, after all, is an old American custom.

If you have any wrapping machines of our make which you do not need at present, why not list them with us? Write our nearest office.

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own power. The answer, of course, is obvious in areas where cheap hydro-electric power is available in quantities. The answer is also obvious in cases where a large amount of steam for process work is required. In such cases power can be made for almost nothing by using a steam turbine to run the generators. For this a high pressure boiler is required. The steam turbine acts as a reducing valve, and processed steam can be led off from the exhaust port at the pressure required for process work. A lot of us fell for the old hokum disseminated by power companies that a municipal plant can always and under all circumstances supply power cheaper than it can be made by the consumer. It just "ain't" so—always.

PLANT SURVEYS

The difficulties in present day production are not diming the vision of far-sighted manufacturers who, knowing that the war will come to an abrupt end in the not too distant future, are planning plant expansion programs so as to take advantage of the new things which have been developed during the war and thus be ready for the competitive conflict which will immediately begin at the beginning of the "peace."

As a means of measuring the competitive power of your present plant facilities, an exhaustive survey should be made. Above I have outlined one means of surveying steam requirements. The general survey also should include lighting, ventilation, dust collection, sanitary equipment, waste disposal, and all manufacturing methods and equipment; all control and record systems and procedures. It is of course difficult for an inside man to look at his own facilities with a detached, unbiased viewpoint. Unless he has, however, a tightly closed mind, he can do it if he criticizes everything under survey on the assumption that everything can be improved radically. If a check list is prepared beforehand, it will be helpful in not omitting any critical question which it might be necessary to ask. If in addition to the check list the plant manager takes time to work out in detail what he considers to be ideal in operating facilities, he will have a standard against which to measure existing facilities.

There will be sudden post war changes in the trade. The emphasis on synthetic chemicals will be increased sharply. There will probably be a swing away from expensive prepared vitamin preparations toward processed food specialties having requisite vitamin characteristics. Some drug manufacturers already are going into the food business. Food manufacturers already are contending that vitamins are foods and not pharmaceuticals. Food manufacturers under the pressure of military necessity are learning to process foods without impairing vitamin content. They also are learning to make balanced food concentrates. Therefore, the wise plant manufacturer working with his sales department will now whip his organization into shape so as to be able to grab the ball and run with it when the time comes.

HEAVY DUTY MIXERS

Mixing Equipment Co., Rochester, N. Y. announces the addition to their regular line of three new heavy duty air driven mixers. Two of them are gear reduction models. The third is a larger direct drive model.

The important features of these mixers especially adapt them to the mixing of paints, chemicals, high explosives and alcoholic compounds. The air driven motors used in these mixers cannot be overloaded or burned out. Even when used in the heaviest liquids they will not stall. The air exhaust from the motor is so arranged that it keeps the motor running cool at all times.

Models of 1 h.p. and 1/3 h. p. are available. They are equipped with gear reduction drive and adjustable shaft length.

MASS MIXING

When it is necessary to deal with heavy plastic masses of the consistency of putty, you should use a mass mixer containing heavy helixes instead of the conventional sigma type mixing blades. Less power is required to drive the helixes because mixing is achieved by attrition rather than kneading. Pharmaceutical masses are deceptive because their physical characteristics frequently change very suddenly during the mixing operation. Recently I saw a heavy sigma blade broken because the mass had suddenly set up as the dry constituents in it became hydrated. Read Machinery Company, of York, Pennsylvania, produces an excellent helix type mass mixer.

UNLOADING PLATFORM

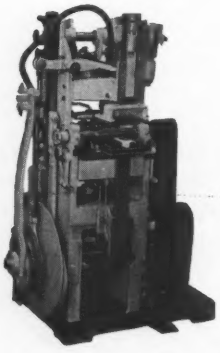
In a recent issue of the Quartermaster Journal, I saw a photograph of a portable unloading platform developed for use in unloading box cars in places where platforms are not available. The device was simply a large platform mounted on a truck chasis. At one end it had a hinged tail gate which could be let down to form a ramp. When pulled beside the door of a box car it provides room for two or three trucks to be backed against it, and the ramp furnishes the means by which a power operated lift truck can be driven directly in the box car. Thus two or three trucks can be loaded simultaneously without delay.

VACUUM DRYING

Vacuum shelf dryers usually are operated by circulating hot water through the shelves. This process generally is slow, especially when it is necessary to dry a mass having a stiff doughy consistency, such as rhubarb and colycynth compound. The process can be accelerated tremendously by circulating fifty pounds of steam through the trays. In one instance, we dried a mass about the consistency of a pill mass in two and three quarter hours. This mass was dried to a moisture content of one

Off to Active Service

IT'S a case of "essential business"—every case, essential to some part of Uncle Sam's fighting effort! Labelrites, and Motoairs *must* contribute to vital parts needed for food, drugs or other supplies before they can get on the New Jersey shipping line . . . .



Many of the cases contain machines never before manufactured by N.J.M. But Labelrites *will* be ready for shipment as soon as the Japanazis submit to their inevitable defeat!

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per cent. In following this procedure the dryers require careful supervision, especially at the start of the operation, because the mass will swell up rapidly and adhere to the trays above. This swelling can be controlled by breaking the vacuum slightly until the dough sets. After this point is reached, the mass will not swell any more until the drying cycle is completed.

HEAVY DUTY CARRIER

New Ernst Stacking Box Carrier has been announced by the Ernst Carrier Sales Company, 1456 Jefferson Avenue, Buffalo, New York.

This new heavy duty Carrier is designed specially to handle a column of self-nesting storage or tole boxes of finished parts, and similar materials. Built-in wedge at bottom of lift post slides under stack eliminating the use of a skid.

After sliding the wedge under the stack, just lean on the handle and the stack of boxes is raised from the floor. When the handle reaches the horizontal position it automatically locks into position. The load is 3 inches off the floor and can be easily moved without tipping. One man can do this, taking the place of several usually required. Forward tipping or swaying is eliminated by adjustable clamp that lowers over the back edge of top box. Side sway is eliminated by a reinforcing bar that is mounted diagonally from the top of post to the base. Unloading the stack is just as easy as loading it.

The new simplicity of Ernst Carrier operation with absolute minimum of man power plus an unusually high safety factor speeds up material handling.

This new Stacking Box Carrier is equipped with 4 large diameter wheels and the square base inside measurements are 33″ wide. Rated Capacity of this carrier is 1500 pounds.

For complete information on this new model, and the entire line of Ernst Carriers, write Ernst Carrier Sales Company, 1456 Jefferson Avenue, Buffalo, New York.

BARREL AND DRUM CARRIERS

New 14″ Lift Model Ernst Carrier with built-in brake for placing and removing 55-gallon drums on and off skids, scales and platforms, has been announced by Ernst Carrier Sales Company, 1456 Jefferson Avenue, Buffalo, New York.

The Built-in brake provides smooth, slower and easier lowering of the container from the top 14″ position. To raise the container a full 14 inches off the floor, just lower the handle from the up position to the horizontal position where the handle automatically locks. By unlocking the handle and applying the brake, the container is lowered to the floor.

This new model has a place wherever material handling is a bottleneck or not moving smoothly. One man takes the place of several formerly required to move and raise drums. Accidents are completely eliminated by the new patented lifting device which lifts containers vertically into locked position on the carrier. The carrier operator does not even have to touch the container. Ruptures, broken bones and similar drum handling injuries are a thing of the past.

In addition, Ernst Carriers save floors, lengthen life of drums and protect drum contents.

Complete information on this patented 14″ lift, 700 pound capacity carrier is available by writing to Ernst Carrier Sales Company, 1456 Jefferson Avenue, Buffalo, New York.

MODERNIZE NOW

This is the time to begin thinking about plant modernization—and doing it as well. It makes no difference that you cannot now get equipment without great difficulty. You must remember that in a modernization program a lot of time consuming thinking and planning must be done. Haphazard improvement of individual departments will in the end accomplish nothing. An overall view of the plant site and the plant business must be taken as a basis for sound modernization. You must look ahead—not five years, but twenty-five. This may seem a little visionary to you but when you stop to think a bit it isn't. Regardless of political changes, taxes, hell or high water you can predict certain things with absolute certainty. You'll have higher taxes and this means higher overhead in every form because everybody has higher taxes to pay. You'll have higher labor costs. In short your job from now on will be to offset the effect of higher costs all the way along the line. You can predict the future form of your business. If you make medicines, cosmetics or foods you'll always have to distribute these products in the form of packages. So long as you have to assemble packaging materials into finished packages, you'll always have a tough handling problem on your hands. Regardless of whether we produce for profit or merely for service in the future you'll always be faced with a complex material handling problem. Now the prime purpose of a modernization program is to reduce handling costs, to utilize space effectively and not waste it; to improve and where possible, mechanize operations; to improve the effectiveness of labor and finally to provide for logical integrated plant expansion. I'm not quaking with fear about what the future will bring. I know what it will bring. It will bring a tremendous volume of work for us all. We will not be so badly affected by the conclusion of the war as the over expanded mechanical industries. The world is filled with an increasing number of sick and undernourished civilians and soldiers as well. They have to be given medicine and food. We'll have to turn the stuff out until the world is rebuilt again. Political changes and exhaustive taxes may take all profit away from us. But for us production men the job is there. We'll have to do it. So get ready now.

(*P. S. Those who have the foresight to modernize before the war are taking tremendously increased output in their strides. In not one instance has a modernization program failed to meet the tests imposed by sudden and sometimes terrific increases in production demands.*)

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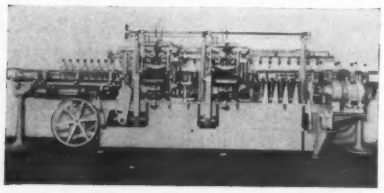

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● APPLICATIONS. *Drugs:* stable emulsions, as mineral oil or agar; to grind and disperse magnesium hydroxide for milk of magnesia; grind glands, chick embryos and tissue for serums and vaccines; grind and smooth salves and ointments; produce colloidal bismuth.

● *Cosmetics:* to grind lipstick; emulsify oils and base for creams; homogenize hand lotions; grind and smooth creams and ointments; impart high gloss to creams.

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SPRAY DRYING

(Concluded from January issue)

A difficulty is presented by those infusions which contain volatile oil even though it is present in small quantity only. The bulk of such oil would undoubtedly be driven off during the process of spray-drying. It might be possible to meet this difficulty by first extracting from the original drug the oil in the form of a concentrated alcoholic tincture and spray-drying a subsequently prepared aqueous extract. The "infusion" would then be dispensed by dissolving the powder in the corresponding quantity of water and adding a quantity of the tincture. However, for the time being, we have not pursued this problem further but have confined our attention to those infusions which are free from volatile oil.

Dry Extracts—From the point of view of drying technique perhaps the most interesting dry extracts are those of cascara and krameria. Berry and Temple[6] showed the great difficulty of obtaining completely soluble solid extracts of these drugs. The best powders which they were able to obtain by careful drying under reduced pressure still contained, in the case of krameria, 1.8 per cent., and in the case of cascara 3.7 per cent. of insoluble matter. Spray-drying is capable of producing completely soluble powders.

Cascara—It was not found to be easy to obtain an aqueous extract which would remain clear while drying was in progress. Any attempt to concentrate the extract resulted in deposition of insoluble matter and the extract became cloudy on standing for a few hours. Finally a clear chloroform water percolate was obtained containing 9.7 per cent. of solids. The powder resulting from spray-drying contained 3.6 per cent. of moisture. On exposure to the air in a thin layer for a fortnight in wet weather it became coherent and plastic, taking up a further 9.3 per cent. of moisture in the process. It has, however, been stored in a screw-capped bottle under ordinary conditions without deterioration. The product was completely soluble in ten times its own weight of water giving a clear solution.

Krameria—By percolation with chloroform water a solution containing 4.0 per cent. of solids was obtained. The spray-dried powder contained 6.7 per cent. moisture. On exposure in a thin layer to humid air it took up a further 8.8 per cent of moisture and became coherent. It may conveniently be stored without deterioration in a screw-capped bottle. The powder is completely soluble in water yielding a clear solution.

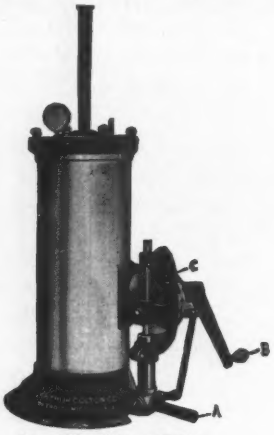
Liquorice—The root was not available, but we had in store some liquid extract of liquorice prepared by students. The extract, of course, contained some alcohol but, as a preliminary experiment, it was diluted with water to contain 12.0 per cent. of solids and spray-dried. The powder obtained contained 5.1 per cent. of moisture. On exposure to air in thin layers for a fortnight it took up a further 5.0 per cent. of moisture but remained a free-running powder. It is to be expected, therefore, that when liquorice root is again available for experimental purposes a very satisfactory powdery dry extract may be produced by spray-drying.

Gentian—Three hundred gm. of gentian was macerated with 3 litres of cold water for two hours and the mixture then boiled for fifteen minutes. The liquid was strained off and the marc pressed. The mixed liquids were filtered when the total solids were found to be 7.7 per cent. The powder obtained by spray-drying was completely soluble in cold water and had a moisture content of 2.6 per cent. Exposed to the atmosphere in a thin layer for a fortnight it absorbed a further 7.0 per cent. of moisture and became adherent. The mass was, however, still brittle and could be crushed to a powder. The product may be stored unaltered in a screw-capped bottle under ordinary conditions.

Cinchona—Preliminary experiments showed that if the extracts of cinchona contained free acid, even volatile hydrochloric acid, before drying, then the resultant powder was charred due to the concentration of the acid. Finally, an extract suitable for drying was obtained by percolating 500 gm. of the drug with 1 litre of 1.5 per cent. hydrochloric acid, adjusting the percolate to *p*H 3.2 by addition of ammonia and filtering. On spray-drying a light buff-colored powder resulted which contained 4.3 per cent. of moisture, and although incompletely soluble in neutral water it was completely soluble in acidulated water. On exposure to the air it took up a further 17.6 per cent. of moisture and became soft and plastic. It may be stored unaltered in screw-capped bottles under ordinary conditions.

It will be seen that, so far, only a few dry extracts have been prepared. The object has been to illustrate the two big advantages of spray-drying, namely:—(1) that powder may be produced by this process where only soft or plastic masses are obtained by other processes and, whereas the products of drying by other methods, even if satisfactory, have to be powdered as a separate operation, spray-drying produces powders in one process; (2) that during spray-drying less change (such as renders some extracts partially insoluble) occurs than when desiccation is attained by any other method. The first point is illustrated by the powders obtained from liquorice, gentian and cinchona, and the second point by the complete solubility of the powders obtained from cascara and krameria. It is highly probable that spray-drying will have other applications, for example, in the production of dry extracts of belladonna and hyoscyamus, but these possibilities have not yet been investigated.

Miscellaneous Substances—Spray-drying would appear to have wide applications in pharmacy, not only on account of the fact that by it very delicate substances such as are destroyed by temperatures over 60° C. or so can be dried successfully and that free running powders are obtained in the place of soft extracts, but also because, doubtless due to the shell like



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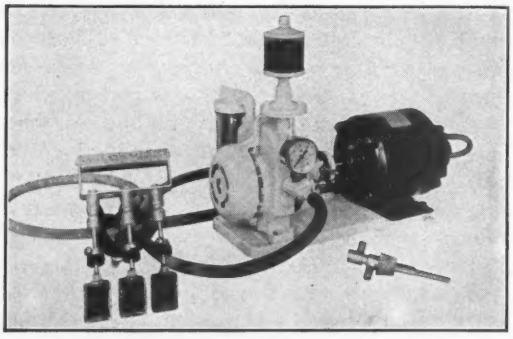

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structure of the particles, the properties of the powder differ from those of powders produced by other methods. To illustrate the wide applicability of the apparatus described the following substances which have been dried successfully may be mentioned:—(1) human blood plasma and serum for transfusion purposes as described by Wilkinson, Bullock and Cowen.[6] In this work was shown that the compliment of guinea pig serum and the anti-A and anti-B agglutinis of human sera are fully preserved in the dry powders; (2) further in the same series of experiments, it was shown that enzymes may be spray-dried without loss. Thus, pepsin was dried without dimunition in activity as judged by the assay process of the United States Pharmacopoeia; muscle extracts were spray-dried without loss in activity of the sensitive glycolytic enzyme system; while peroxidase was present in the powder obtained from fresh cow's milk; (3) since then we have obtained gelatin powder by spraying both 5 per cent. and 10 per cent. solutions from a warmed feed bottle; (4) tragacanth, although giving a very viscous solution, may be dried by spraying a 1 per cent. solution. Acacia powder too has been obtained by spray-drying a 5 per cent. solution of the tears.

We do not know whether the spray-drying of these substances will find applications in pharmacy, but we are examining the products to ascertain if they have specific advantages over powders produced in the ordinary ways.

The Dispensing of the Spray-dried Powders—When a spray-dried powder is examined under the microscope it is seen to be made up of hollow shells, whole or broken, of the dried material. These thin shells are filled with air. When resolution takes place the shell very rapidly dissolves but leaves the air bubble behind. The air bubbles must be given time to rise to the surface before the solution appears clear. There is no difficulty in effecting solution but to prevent balling it is usually best to place the weighted quantity of powder on the surface of a small quantity of water and stir it in so as to form a strong solution which is then diluted as required.

It has been shown that the dried powders may be granulated and made into tablets, effervescent or otherwise. In the making of such tablets a small amount of extraneous material is of course introduced, but the dispensing would be much facilitated; a fresh infusion being prepared by simply adding the requisite number of tablets to water and shaking.

In previous work it has been shown that fresh infusions of quassia and calumba being made with cold water are heavily infected with microorganisms and rapidly "go bad." The spray-dried powders described are not of course sterile, but if desired such sterility could easily be attained by sterilizing the aqueous solutions before drying and operating the plant as described for plasma and serum. In any case if the solutions were boiled before drying then the reconstituted infusions would be no more liable to deteriorate than the present official infusions. The powders of course are stable indefinitely. It would appear, therefore, that spray-drying is an excellent method of preserving the infusions of at least such drugs as do not contain appreciable amounts of volatile oil, except perhaps in the case of senega where the resultant powder is extremely hygroscopic.

Discussion—The above work is not put forward as being complete, rather it introduces a new field of investigation. The design of the plant is capable of improvement, and greater efficiency can be obtained when the optimum conditions for working have been ascertained. Many more substances should be dried and the products carefully examined. Meanwhile the results are very promising. We have not so far failed to obtain a powder from any of the extracts which we have attempted to dry, and even the most delicate enzymes and biological substances have remained undamaged. How far it will be desirable to introduce the products into pharmaceutical practice remains to be decided. Although relatively small, the plant described above is still outside the range of most, even hospital, dispensaries, and would in general only be operated on the wholesale scale. Liquid extracts, infusions and tinctures have found a wide use in the past, but in some cases probably this has been due to the fact that the corresponding dry but completely soluble powders were not available. It is easier to measure a liquid than to weigh a small quantity of powder, but the dry powders are much more stable than any liquid preparations. Desiccation is the ideal method of preservation; and the difficulty of weighing out could in some cases be overcome by the powders being made into soluble tablets containing a definite weight of the preparation.

Summary—1. The development of spray-drying as a method of desiccation is traced and a description is given of a small spray-dryer suitable for use in pharmacy either for experimental work or for the manufacture of relatively small quantities of galenical preparations.

2. Attention is drawn to the wide application which spray-drying may find in pharmacy.

3. It is suggested that the ideal way of preserving infusions is by spray-drying, and the powders for infusions of quassia, calumba, senna and senega are described. The powders might be made up into tablets for convenience in dispensing.

4. Dry extracts of cascara, krameria, liquorice, gentian and cinchona are described. All may be obtained in a form conpletely soluble in water.

5. The successful drying of certain other biological fluids and enzyme solutions as well as gelatin, tragacanth and acacia is described.

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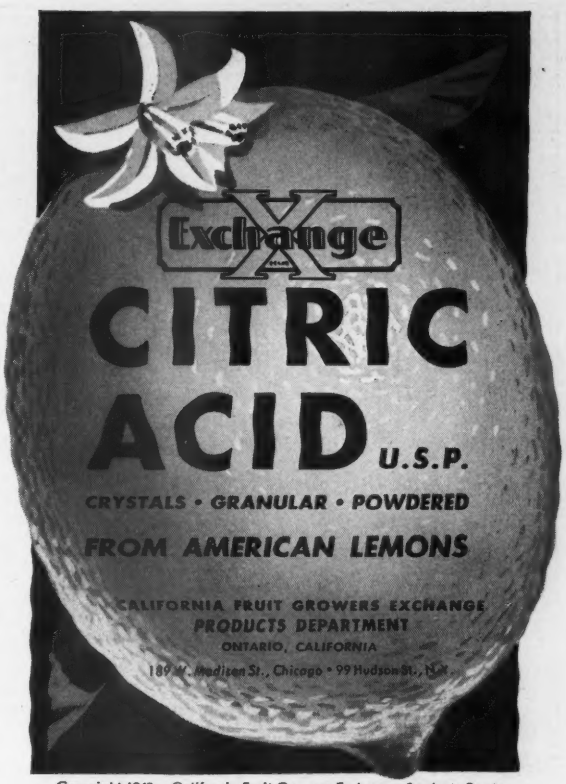

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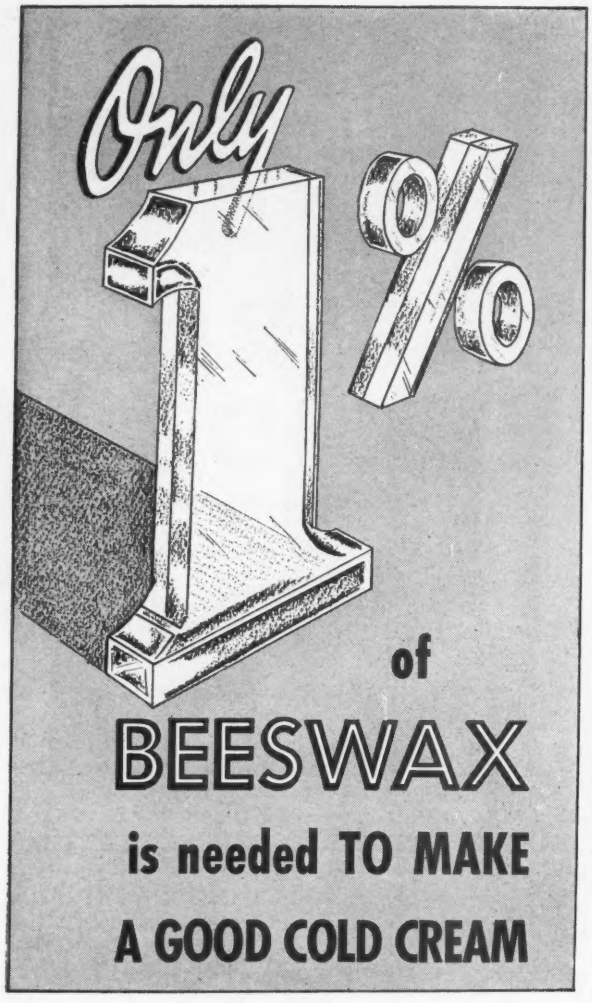

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LIPSTICK PRODUCTION

The outstandingly important property of lipstick waxes is their melting point, which means that synthetic substitutes must always be selected with this factor well in mind. Melting points of the commoner waxes normally used in lipsticks are approximately as follows:

Beeswax	63-65°C.
Ceresin	74-80
Carnauba wax	84-86
Ozokerite, bleached	70-82
Montan wax, bleached	70-85
Japan wax	52-56
Paraffin waxes	42-65

Hydrogenated fats and synthetic waxes cover this range quite effectively. It should be mentioned that mixtures of different waxes do not possess exactly the melting point that one might expect from the individual melting points and ratio of the constituent waxes. Refined ozokerite is chemically the same product as ceresin, but the latter is frequently adulterated, in commerce, with paraffin.

In addition to these waxes and their synthetic counterparts, including hardened oils and diglycol stearate, etc., other materials commonly used in lipstick manufacture include mineral oil, castor oil; sesame, peanut and other vegetable oils; petroleum jelly (short fibre), lanolin absorption base, deodorized cocoa butter, cetyl and stearyl alcohols, wool wax, spermaceti, stearic acid, benzoinated lard; perfume, color, antioxidants and preservatives.

Castor oil, most commonly used solvent for the fluorescein dye eosin, is not of course miscible in mineral oil. This unfortunate disadvantage has led to some difficulty in devising appropriate mineral vegetable lipstick blends. Solubilized castor oils, of the kind used in lubricants, are not suitable for application in this direction. Other eosin solvents, apart from castor oil, include butyl stearate, lard, cetyl alcohol (to some extent), and the ethylene ether of diethylene glycol, otherwise known as Carbitol. Typical proportions of eosin and castor oil range from 2-5 per cent. of the former and 5-20 per cent. of the latter. Deodorized grades of castor oil are preferred for lipstick manufacture.

Another approach to the problem of preventing the precipitation of eosin out of solution is to keep the proportion of hydrocarbons on the low side, e.g., by using not more than 15 per cent. mineral oil, or preferably less.

Petrolatum aids the spreading of certain kinds of base, but more than 10 per cent. is apt to impart an undesirable greasiness. It has frequently been omitted.

Lanolin is a very useful ingredient in a stick because it gives the tackiness so essential to keep the toners and lakes from rubbing off. It imparts to the finished product a smooth-grained appearance, necessary to keep the stick from crumbling. Lanolin also acts as a binder to hold the castor and mineral oils together; it prevents sweating of the oil on the outside of the stick in most cases. The percentage of lanolin may range between 5 and 15. Over 15 per cent. the product is likely to become too sticky. Lanolin helps counteract the irritation and drying effects on the skin caused by the eosin. Because it is so readily absorbed by the skin tissue, it deep roots the stain and secures greater indelibility. Lanolin absorption bases are in certain respects (e.g., freedom from stickiness) superior to lanolin itself.

Beeswax is the most frequently found substance in a lipstick base. It gives a good consistency to the base and, together with the lanolin, aids in binding the castor oil, for beeswax is almost as soluble in a lanolin-castor mixture as it is in a hydrocarbon combination, such as paraffin. Beeswax also, because of its shrinkage properties, makes the expelling of the finished stick from the mould a much simpler process. Chemically the wax stabilizes the eosin in the stick by the presence of the free melissic and cerotic acids contained in the beeswax itself. On the other hand, to produce a shiny, brilliant lipstick a low beeswax content is necessary. Ten per cent. of beeswax should never be exceeded for ordinary glossy sticks.

Ceresin resembles beeswax in many of its properties and may be used along with beeswax. This earth wax is a fair binder, with about the same consistency as beeswax, but it does not have the shrinkage property of the latter. The crystalline structure of ceresin does not tend to change with time, for once this ingredient has crystallized out in the mixture no further change will be noted. Beeswax and ceresin can be used together in order to secure a fine-grained mixture; as each product furnishes a complement of properties to the other.

Bleached ozokerite, including genuine ceresin, of course, is especially valuable because of its property of retaining oils uniformly and permanently throughout the wax structure of the lipstick. Carnauba wax, when present in about 2 to 8 per cent. of the total mass, helps to promote rigidity and good finish.

Cetyl alcohol has risen to much prominence in every field of cosmetic activity. It is a good solvent for the

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eosin in the stick and helps in the permanence of the stain. However, one must use this product with discretion, never exceeding 5 per cent. of the total base, or else the desired "cetyl effect" will be replaced by a tendency to dryness.

Paraffin wax and mineral and vegetable oils are also important constituents of many lipstick bases. Insoluble fillers such as talc, chalk and china clay, are not usually employed—but a very small proportion of zinc oxide or titanium dioxide is sometimes very successfully employed for imparting brilliance or modified shading to the color base.

The lipstick must be of high melting point (*circa 55-65 °C.*) so that it will not soften unduly in the summer; it must be hard enough to withstand pressure applied to it without breaking. It must spread easily and smoothly, but not leave too thick and greasy a deposit. These properties are by no means easy to balance up together, especially when utilizing a more or less "scratch" lot of ingredients.

Well-known lipstick shades include the familiar capucine (red, very faint yellow note), vif (intense red), moyen (middle red, with a suggestion of blue), fonce (more blue than moyen), invisible (developing a pale yellow-orange-red shade), cerise (more blue than fonce). New "fancy" names are normally, however, evolved every year—following in this respect the precocious but profitagle dictates of fashion design.

Among the oil-soluble dyes used in lipstick manufacture are Oil Red, Scarlet, Carmine and Vermilion. Poucher very truly states that "splendid colors are obtained with the insoluble salts of lithol red . . . and lithol rubin." In addition to pigments and oil-soluble dyes, carmine and acid eosin (less frequently "eosin stearate") are nowadays employed as coloring agents in lipsticks. Shading may be artfully imparted by the judicious use of white pigments such as Zinc oxide.

Delicate perfumes may be used in lipsticks, but should be intensified in the presence of high proportions of lanolin or castor oil. Some authorities recommend rose perfumes with peach or clove with strawberry. The late Felix Cola published the following simple but effective lipstick perfume formula:

Rhodinol	30 g.
Linalol	3
Neroli	2
Heliotropin	20
Phenylethyl alcohol	13
Geraniol	32

It must, of course, be remembered that lipstick perfume is also a flavor. For this reason, vanillin and coumarin are used; also other flavoring materials, including amyl acetate and butyrate, together with traces of the so-called peach, strawberry, raspberry and cherry aldehydes.

Antioxidants and preservatives are needed in certain types of lipstick.

In some factories, pigments and dyes are ground with castor oil to make a color base, while the remaining ingredients are melted together to form the lipstick base. In this way, it is possible to make a large batch of the lipstick base suitable for all shades and much smaller batches of different shades of color base. Exact proportions of color and lipstick base are melted together on a water bath and stirred until homogeneous. Although the pigments do not have any great tendency to settle, heating should not be unduly prolonged. The melt is poured into moulds which are then rapidly cooled. Slow cooling is not only a less satisfactory production job but it also tends to promote the growth of wax crystals with consequent weakening of the stick. Sticks are removed from the mould, inserted in the case and then "flamed" to remove finger marks. "Flaming" consists of rapidly turning the lipstick through a small bunsen flame in order to melt the surface of the stick. This must be done uniformly and rapidly. *S. P. Jannaway, Soap, Perfumery, Cosmetics.*

CASTOR OIL SUBSTITUTES

Substitution of castor oil in lipsticks with tetrahydrofurfuryl alcohol and certain secondary solvents is recommended to overcome the disadvantages of the oils of low solvent power for the usual coloring material, and its tendency to rancidity. It is found that whereas 0.5 part of tetrabromfluorescein dye in 100 parts castor oil is the limit of solubility, in tetrahydrofurfuryl alcohol at least, 28 parts of the dye will dissolve in 100 parts of the alcohol.

What follows from this is not only that the greater solvent power of the suggested ingredient for the halogenated fluorescein dyes enables production of a lipstick with greater lip-staining properties, but that it may contain a much smaller proportion of the dye with consequent reduction of the risk of irritation to the skin.

An alternative method is the use of tetrahydrofurfuryl alcohol to replace only a proportion of the castor oil.

Proportions of the various ingredients may vary widely. The amount of the halogenated fluorescein dye may be 0.5-2%; of the castor oil (or secondary solvents) 15-33%; and of the tetrahydrofurfuryl 5-20%.

The secondary solvents may be lauryl lactate, ethylene glycol monoricinoleate, propylene glycol monolaureate, glycerol monoricinoleate, ortho methyl cyclohexanone glyceryl acetal, di-ethyl tartrate or tri-ethyl citrate. *Brit. Patent 548,329.*

THIAMINE SENSITIVITY

During the past year Eisenstadt encountered 2 cases of hypersensitivity to thiamine hydrochloride given parenterally. Even after the allergic reaction (local anaphylaxis in 1 and angioneurotic edema of the tongue, lips and eyelids and violent sneezing in (1) appeared, both patients subsequently tolerated thiamine hydrochloride orally without any untoward effects. Why this was so is hard to explain; possibly a rather high threshold of sensitivity to vitamin B_1 existed in these individuals and when it was taken orally there may not have been a sufficiently high level at any one time to evoke an allergic reaction. The immunologic response of the patients was identical with that of well-known sensitizing proteins. Constitutional reactions resulted only when the interval between injections exceeded one week. The possibility of an allergic reaction following parenteral administration increases as the interval between injections is lengthened. Intradermal tests were positive and passive transfer tests were negative. Five other similar cases have been reported. *Minn. Med. vol. 25, p. 861.*

DIGITALIS SUBSTITUTES

A crystalline substance from a Balkan digitalis plant, or foxglove, has proved more effective in treating heart disease than the digitalis in common use, Dr. Francis E. Chamberlain and Dr. Maurice Sokolow, of the University of California Hospital, report.

The substance is called cedilanid and is found only in *Digitalis lanata.* Terming it the "first superior substitute for digitalis yet to be found," the California physicians say that it produces the same effect as digitalis and acts more rapidly. In many cases, they report, patients were benefited within 10 to 20 minutes after being given cedilanid. It may be given by mouth or by injection into a vein. Their report states that this drug is now on the market and readily available to physicians. *Science News Letter.*

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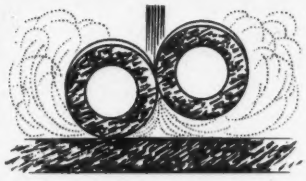

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DOMESTIC STORAX

Like so many other imported products, the source of supply of which has been cut off because of war-time conditions, storax obtained from the Asiatic sweetgum tree is no longer available to American users. This has led the Texas Forest Service, a division of Texas A. & M. College, to begin an investigation into the possibilities of its production from the native sweetgum tree, *Liquid-ambar stryraciflua.*

Storax, as it comes from the tree, is a sticky, grayish-white, gum-like substance that exudes from the sapwood after the tree is wounded. Upon being heated and allowed to cool, it solidifies and becomes a deeper tan in color. It is used commercially in certain medicines, drugs and adhesives; for perfuming soaps and powders, and for flavoring tobacco.

To obtain storax, the tree is "boxed" with diagonal cuts through the bark and about 1/8 inch into the outer layer of wood near the base of the tree. The gum collects on the wound and is collected at about three-week intervals by scraping off with a dull knife or similar tool. Before it is ready for shipment it must be strained through cheese cloth to remove particles of bark and other foreign matter.

At times in the past, notable during World War I, a considerable volume of storax has been obtained from the native sweetgum, and a certain amount of information concerning possible yields is available. However, it is felt that more complete information on yields as affected by tree size, site factors, and climatic conditions is desirable. It also should be determined how the quality of the native storax compares with that previously obtained abroad. Figures now available from various sources indicate that yields of from one and one-half to three and one-half ounces per tree per year may be expected. While this is indeed a relatively small yield per tree, it should be pointed out that during World War I the price is reported to have gone as high as $8.00 per pound, but now is only quoted at 90 cents a pound.

The present investigation was begun in June of this year (1942) and will run for a total of at least two years. By the end of that time sufficient information should be available to indicate whether or not the production of storax from the native sweetgum can be considered as a practicable and profitable venture for the farmers and other timberland owners of East Texas.

HAIR WHITENING

The color of hair is due to pigment in two forms, a soluble one which pervades all the cells and also as fine granules which are most numerous in the outer part of the cortex but are present also in the central cortex and the medulla. The pigment is melanin, thought to be formed by the action of tyrosinase on tyrosin (Rothman, Stephen: In Vitro Studies on Pigmentation, *J. Invest. Dermat.* 5:61 (April 1942) and may vary widely in its color. Rothman, by exposing it in vitro to the action of ultraviolet radiation, caused it to become paler, a portion even losing all its color and becoming soluble. The melanin of blond hair is of a much different shade than that of red or dark hair. The amount of granular melanin varies a great deal, much more being present in dark hair. It may be seen by use of any of the objective lenses of the microscope. For the detection of gas in the hair the low power objective is best, for it allows more chance for light to strike the hair from above and be reflected. Too strong a reflected light is confusing, for it lights up the many small reflecting surfaces mentioned by Strong (R. M.: The Cause of Whiteness of Hair and Feathers, *Science* 54:356, 1921) too brightly. A mild light will show the reflection from the gas without this confusion.

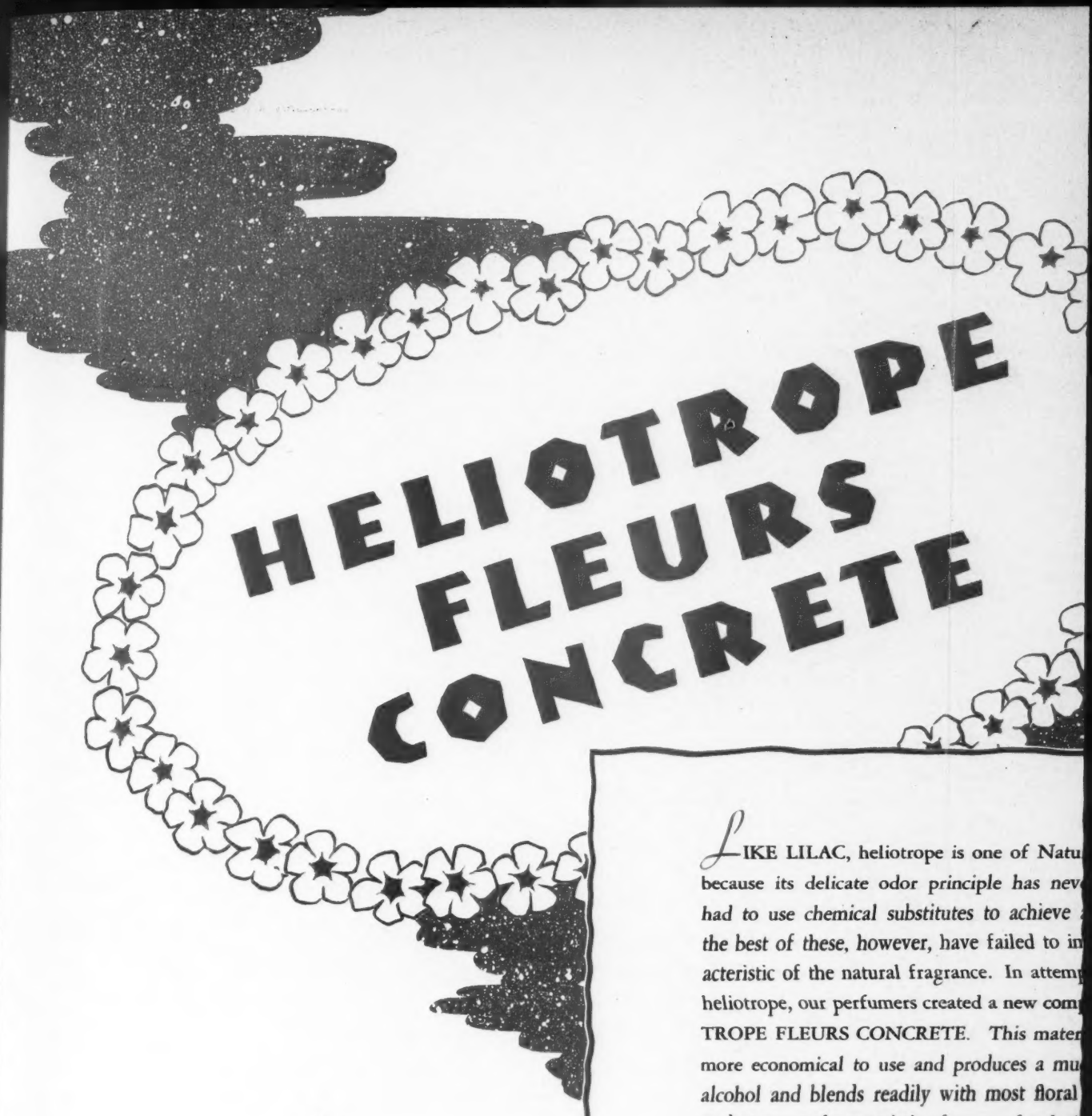
Occasionally in examining hairs by transmitted light, larger homogeneous dark masses are seen, which by reflected light appear white. These are globules of gas, to which further reference will be made. Besides reflecting globules of gas there are many minute breaks and angular surfaces in and on the hair, all of which reflect light and modify the effect of the melanin on the color of the hair. Jarnecke (H.: Changes of Color of Hair by External Influences, *Dermal, Wchnschr.* 106:212, 1938) says that the content of silicic acid in hair also influences its color.

There are three theories of the way in which hair becomes gray:

1. The dark hair falls out and the new hair appears without pigment. This is a common occurrence in cases of alopecia areata. In younger patients the new hair acquires pigment after a time. In old patients it is apt to remain white. Most authorities agree that this is the way in which ordinary grayness occurs.

2. The cells of the medulla become phagocytic and carry off the pigment through the hair root (the theory to explain sudden blanching advanced by Metchnikoff, Elie: On the Process of Hair Turning White, *Proc. Roy. Soc.* London B 69: 156, 1901-1902).

3. The sudden blanching occurs by the formation of gas which appears in



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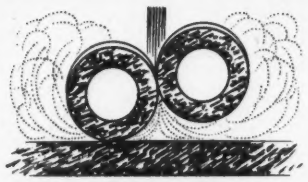

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DOMESTIC STORAX

Like so many other imported products, the source of supply of which has been cut off because of war-time conditions, storax obtained from the Asiatic sweetgum tree is no longer available to American users. This has led the Texas Forest Service, a division of Texas A. & M. College, to begin an investigation into the possibilities of its production from the native sweetgum tree, *Liquid-ambar stryraciflua.*

Storax, as it comes from the tree, is a sticky, grayish-white, gum-like substance that exudes from the sapwood after the tree is wounded. Upon being heated and allowed to cool, it solidifies and becomes a deeper tan in color. It is used commercially in certain medicines, drugs and adhesives; for perfuming soaps and powders, and for flavoring tobacco.

To obtain storax, the tree is "boxed" with diagonal cuts through the bark and about 1/8 inch into the outer layer of wood near the base of the tree. The gum collects on the wound and is collected at about three-week intervals by scraping off with a dull knife or similar tool. Before it is ready for shipment it must be strained through cheese cloth to remove particles of bark and other foreign matter.

At times in the past, notable during World War I, a considerable volume of storax has been obtained from the native sweetgum, and a certain amount of information concerning possible yields is available. However, it is felt that more complete information on yields as affected by tree size, site factors, and climatic conditions is desirable. It also should be determined how the quality of the native storax compares with that previously obtained abroad. Figures now available from various sources indicate that yields of from one and one-half to three and one-half ounces per tree per year may be expected. While this is indeed a relatively small yield per tree, it should be pointed out that during World War I the price is reported to have gone as high as $8.00 per pound, but now is only quoted at 90 cents a pound.

The present investigation was begun in June of this year (1942) and will run for a total of at least two years. By the end of that time sufficient information should be available to indicate whether or not the production of storax from the native sweetgum can be considered as a practicable and profitable venture for the farmers and other timberland owners of East Texas.

HAIR WHITENING

The color of hair is due to pigment in two forms, a soluble one which pervades all the cells and also as fine granules which are most numerous in the outer part of the cortex but are present also in the central cortex and the medulla. The pigment is melanin, thought to be formed by the action of tyrosinase on tyrosin (Rothman, Stephen: In Vitro Studies on Pigmentation, *J. Invest. Dermat.* 5:61 (April 1942) and may vary widely in its color. Rothman, by exposing it in vitro to the action of ultraviolet radiation, caused it to become paler, a portion even losing all its color and becoming soluble. The melanin of blond hair is of a much different shade than that of red or dark hair. The amount of granular melanin varies a great deal, much more being present in dark hair. It may be seen by use of any of the objective lenses of the microscope. For the detection of gas in the hair the low power objective is best, for it allows more chance for light to strike the hair from above and be reflected. Too strong a reflected light is confusing, for it lights up the many small reflecting surfaces mentioned by Strong (R. M.: The Cause of Whiteness of Hair and Feathers, *Science* 54:356, 1921) too brightly. A mild light will show the reflection from the gas without this confusion.

Occasionally in examining hairs by transmitted light, larger homogeneous dark masses are seen, which by reflected light appear white. These are globules of gas, to which further reference will be made. Besides reflecting globules of gas there are many minute breaks and angular surfaces in and on the hair, all of which reflect light and modify the effect of the melanin on the color of the hair. Jarnecke (H.: Changes of Color of Hair by External Influences, *Dermat, Wchnschr.* 106:212, 1938) says that the content of silicic acid in hair also influences its color.

There are three theories of the way in which hair becomes gray:

1. The dark hair falls out and the new hair appears without pigment. This is a common occurrence in cases of alopecia areata. In younger patients the new hair acquires pigment after a time. In old patients it is apt to remain white. Most authorities agree that this is the way in which ordinary grayness occurs.

2. The cells of the medulla become phagocytic and carry off the pigment through the hair root (the theory to explain sudden blanching advanced by Metchnikoff, Elie: On the Process of Hair Turning White, *Proc. Roy. Soc.* London B 69: 156, 1901-1902).

3. The sudden blanching occurs by the formation of gas which appears in

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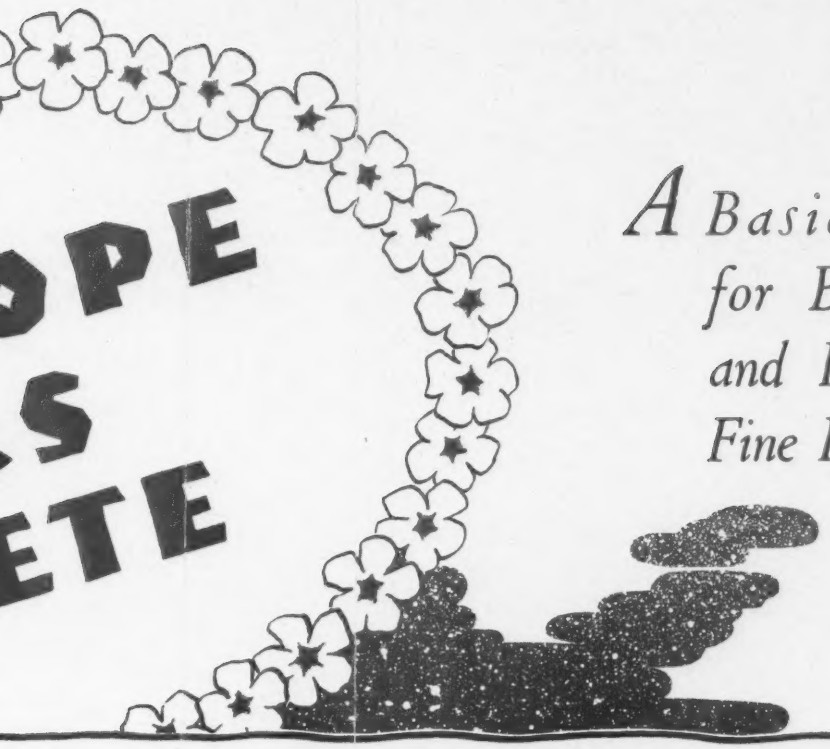

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VOL 52 2

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There's a thought in this for manufacturers in *our* industry—for the makers of soaps, perfumes, cosmetics, sprays and technical products of every description. It is for them to sub-contract their perfume compounding to specialists. Let these specialists create their new fragrances, making them to the individual manufacturer's desired specifications and for exclusive use in his products. Thus, he can effectively dispose of one major problem of manufacture, leaving it to a firm such as ours, for instance, to provide the raw materials and attend the research, compounding and supply of his *finished* perfumes. Our facilities are already in the service of hundreds of manufacturers who have found advantage and not a little profit in sub-contracting their odor problems to us.

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In our Country's Service

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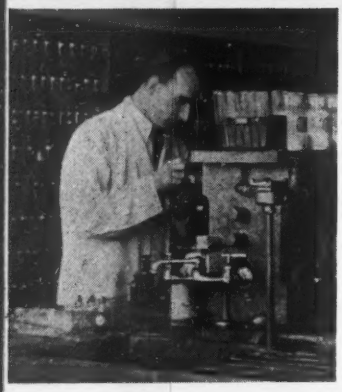
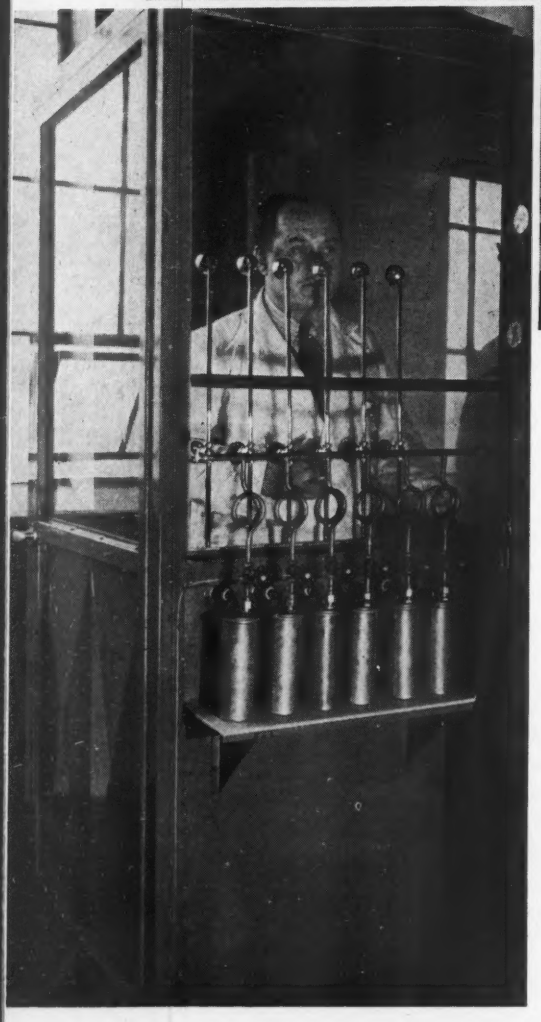


OUR Perfume Division is one of the most highly specialized departments in our entire organization. Normally, its work involves the use of—and demands an intimate knowledge of—hundreds of complex, aromatic substances. Long training and experience, rare acuteness of smell, and the uncanny ability to combine these materials into pleasing harmonies of fragrance, are minimum requirements for the personnel of this division.

Today, restricted raw materials impose a greater burden than ever upon these perfumers, and it is a credit to their ingenuity and fine skill that they are still able to create odor blends of compelling character from shelves long since depleted of many of their most useful ingredients.



This smelling booth is an important aid in testing and comparing perfumes in the final stages of formulation. An exhaust fan removes all odors foreign to the one being tested, while the nozzles which are under the operator's control admit the full fragrance of the composition's finely blended ingredients.

Aiding our perfumers in another way—and of incalculable value in their work—is the exercise of constant laboratory control which insures absolute purity and uniformity of all materials used in their compounding . . . more background values—and all a ***part*** *of our products,* ***apart*** *from their price!*

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the hair, and the light reflex from these bubbles conceals the pigment, which remains in the hair.

The Metchnikoff theory was evidently an extension of his general theory of phagocytosis and has found no support.

The third theory found its greatest exponent in Landois (L.: Die plotzliche Ergrauen der Haupthaare, *Virchows Arch. f. path. Anat.* 35:575, 1866) and is generally accredited to him, although he states that Griffith was the first to demonstrate the reflecting bubbles of gas in the hair. Landois supported his claim by microscopic study of the sudden blanching of the hair of a man aged 34 with delerium tremens, who originally had blond hair and blue eyes. Landois's theory is that hair suddenly blanched does not lose its pigment but the pigment is concealed by the reflexes from the gas bubbles. He agrees that ordinary gray hair, on the contrary, is usually gray because of loss of pigment.

The fact that in rare instances hair can quickly become gray must be acknowledged. We need further proof of Landois's gas bubble explanation, which is difficult to get, for so rare an event seldom occurs under the eyes of a trained observer. The old idea that hair is practically a dead tissue, cut off from the metabolic influences in the body, must be forsaken. *J.A.M.A.*

VITAMIN C IN NUTS

Twice the amount of vitamin C you need for a day is contained in a single pickled walnut weighing slightly over half an ounce, three English scientists, Magnus Pyke, Ronald Melville and Henry Sarson, report to the English scientific journal, *Nature*.

The fact that unripe walnuts contain large amounts of vitamin C was apparently first discovered by a Russian scientist. The English scientists examined other kinds of nuts, including hickory, almond and horse chestnuts, but none of these contained as much vitamin C as walnuts.

ACCIDENT PRONENESS

The following quotation is made from the *Journal of The American Medical Association*, November 14, 1942. I am quoting the item verbatim because it describes very significantly the reasons why certain people have so many accidents. What interested me particularly was the emphasis on the worker's environment as being a causative factor of accidents. For years I have been preaching the doctrine of absolute order and absolute cleanliness as a means of preventing the worker's environment from continuously obtruding itself upon his consciousness.

"Recent studies made by the Industrial Health Research Board of the Medical Research Council of Great Britain add further convincing evidence that some individuals in a working group are more liable to accidents than others in the same circumstances; they may be designated as "accident prone." Various general conditions of work and environment have been recognized as contributory causative factors affecting the incidence of accidents, such as hours, speed and type of work, experience, age and fitness of workers, heating, ventilation, lighting and other working conditions, and attitudes of workers and management. In addition to these general factors it is evident that an important specific factor of "accident proneness" may be present in certain individuals. Such persons apparently have a special liability to be the subject of accidents just as some are particularly susceptible to certain diseases. Not only may a small percentage of a working group show a high percentage of the total sickness disability in the entire group; it has been found that as little as 10 per cent. of a group may be responsible for as much as 75 per cent. of the accidents occurring among them.

"Accident proneness may be an innate characteristic of some people and a personal phenomenon independent of any question of responsibility, conscious action or blameworthiness. Those who sustain an undue number of one kind of accident also sustain an undue number of other kinds. Accident proneness is a relatively stable quality obeying fairly definite laws. Moreover, those who are most often ill tend, on the whole, most often to have accidents, indicating that the prevention of accidents may depend to a considerable degree on the prevention of sickness and emphasizing further the need for greater attention to the industrial health program as a whole.

"According to the British studies, accident proneness may be measured to a certain extent by tests involving rapid and accurate coordination of hand and eye and by linguistic intelligence and mechanical aptitude tests. Admittedly, all such tests are as yet in the experimental stage and their validity at present appears much greater among skilled workers than in unskilled occupations. A second suggested method of predicting the "accident prone" is by determining the number of accidents sustained by each individual in a working group during a previous period of exposure. This method has certain disadvantages, particularly from the points of view of the delay in time or waiting period involved and the present inadequacy of accident records as a whole. The latter fact emphasizes the great need for better records of accidents. A combination of these methods of testing probably is the most effective way of using our knowledge of accident proneness to reduce the incidence of accidents.

"As indicated in the British report, there is no question of not employing those who are accident prone. They are fairly normal persons and can be usefully engaged in most occupations. It is only if they are employed in an occupation with a high accident liability that they are a danger to themselves and to others. Bristol has indicated that, while it appears reasonable that a person should be removed from a position in which he is a potential danger to himself and others, industries which realize their obligations to society in general undoubtedly will be slow to penalize an individual because, through no fault of his own, his mental and physical qualities are not equivalent to those of fellow employees. The chief objective should be to see that these accident prone individuals are identified through medical and other examinations and are assigned to work in which the severity and danger of their potential accidents are reduced to a minimum."

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ADVANCING THERAPY

PAINLESS CHILDBIRTH

A new technique which makes childbirth so painless that a mother can read a book or chat with the doctor while her baby arrives has been developed by two young physicians at the Marine Hospital in Stapleton, S. I.

The method is called continuous caudal analgesia. It has been employed in 589 cases with results "almost 100 per cent. effective," according to its devisers, Dr. Robert A. Hingson and Dr. Waldo B. Edwards, whose own wives have used it.

Materials required are a flexible steel needle, costing about $1.50, and four or five ampules of a solution of metycaine, a cocaine substitute, costing about 30 cents an ampoule.

At the point when labor pains ordinarily become extremely uncomfortable and painful, the flexible needle is inserted about three inches into the body near the base of the spine and in a direction parallel to the spine. A local anesthetic cancels the pain caused by inserting the needle.

Then, at intervals of perhaps thirty or forty minutes, the metycaine is injected through the needle. The metycaine bathes the nerves in the caudal canal near the base of the spine and extends its pain-killing influence as far up as the chest.

It does not, however, enter the membranes covering the spinal column, with the result that there is no loss of consciousness, nor any hindering of muscular movements on the part of the mother during the birth.

The killing of pain is so complete that when the doctor wants the mother to assist the birth by exercising a voluntary muscular movement, in harmony with the involuntary muscular movements which expel the child from the mother's body, he must keep a hand upon her abdomen so that he will be able to tell the mother when she is having what normally would be a body-wracking labor pain.

There are several reasons why continuous caudal analgesia is not yet ready for general use by any doctor. One is that insertion of the needle is an art. It must be injected at exactly the right spot, and to the right depth. If it were done maladroitly, it might break off and then an operation would be required to remove it.

Also, it must not touch the spinal sac. The correct dosage of metycaine in the caudal canal would be too powerful in the spinal sac, with dire results. Also, the metycaine must be administered at the proper intervals in the proper amounts.

The extremes of time over which the metycaine has been administered during tests so far are thirty-five minutes, and thirty-three hours.

Aside from the psychological advantage to the mother of painless birth, continuous caudal analgesia has other advantages. There is less bleeding. Breech deliveries are greatly facilitated. Use of the metycaine has no effect on the child.

VITAMERS

Biotin, widely distributed vitamin believed by some to play an important role in cancer, has seven sister vitamins, or vitamers, Dr. Dean Burk and Dr. Richard J. Winzler, of the National Cancer Institute and the National Institute of Health here, have discovered.

Vitamers, they explain in their report to Science, is a newly coined term for compounds that act to overcome a given vitamin deficiency in one or another animal, plant or microorganism. Several compounds with vitamin D activity are known to exist, and there are likewise several vitamers for vitamin K and for some of the other vitamins.

Discovery of the vitamers for biotin, Dr. Burk explained, means that a great deal of the work on the role of biotin in nutrition and in relation to the cancer problem will have to be re-evaluated. Some of the results obtained may, for example, be due to one of biotin's vitamers rather than to biotin.

The biotin vitamers are: Miotin, tiotin, rhiotin, pimelic acid and three derivatives of biotin, methyl ester, sulfoxide and diaminocarboxylic acid. Miotin, tiotin and rhiotin have not yet been identified chemically but are believed to be very closely related to biotin.

Miotin, tiotin and diaminocarboxylic acid do not combine with avidin, the chemical in raw egg white which combines so greedily with biotin that it or raw egg white has been fed to patients to produce a deficiency of biotin, in the hope of curing cancer. The theory behind this attempt to cure cancer rests partly on a report that cancer tissue contains a high content of biotin.

It may be that miotin, rather than biotin, is the growth-stimulating substance used by cancer tissue. If this should be so, it would change the line of attack on cancer, but there is no evidence yet on this point.

Miotin in addition to failing to combine with avidin, is unlike biotin in being easily destroyed or changed by heat, whereas biotin is heat stable.

the POTENCY *of* PURPLES

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Failures on those going into a clean environment is generally under 2% and always under 10%. Laboratory experiments show that these materials remain effective for 8 to 9 days. The hair does not appear oily or greasy. The cost of the drugs is low and their odors are easily masked. The drugs, are harmless.

Specifications. Lauryl thiocyanate (dedecyl thiocyanate; lauryl rhodanate) is made only by duPont de Nemours. The quality available is technical and is marketed as "lorol rhodanate." This grade contains 60% lauryl thiocyanate and 40% of certain homologues, some of which may be harmful; therefore, specify that the thiocyanate was manufactured from lauryl alcohol which began to distill at or above 236° C. (atmospheric pressure) and of which 95% distilled below 319° C. The white oil used as a diluent is a high boiling paraffin (I.B.P. 325° C.) with a very low aromatic content, sold as P31 (Shell Co.).

Lethane 384 Special (12.5% N-butyl carbitol thiocyanate; 37.5% beta-thiocyanoethyl laurate; 50% refined paraffin) is produced by Rohm and Haas. The material is sold in 50% dilution. Dilute it a further 50% with the same oil as already mentioned.

Derris cream is a solution of derris extract in castor oil, the whole emulsified with lanette wax to make a cream with 1% rotenone and 7% derris extract. *J. R. Busvine and P. A. Buxton, Brit. Med. J. p. 464.*

TREATING ACNE

Lawrence and Werthessen used estrogen in the treatment of acne of 14 women and 11 men. Only 3 of the women and 4 of the men were less than 20 years of age. The average age of the women was 25.8 years and that of the men 20. It seems unlikely, therefore, that spontaneous remission can be an important source of error in evaluating the results of estrogen therapy. The duration of the acne varied from one to thirty years. Seven of the women complained of severe dysmenorrhea, 8 of hypomenorrhea and 2 of menorrhagia. Thirteen had definite exacerbations of the acne at the time of menstruation. Diethylstilbestrol or ethinyl estradiol was taken orally. The initial dose of the former was 0.5 mg. daily until tolerance was determined. Medication of women was omitted four days before the predicted menstrual period and resumed forty-eight hours after menstruation had ceased. Ethinyl estradiol was given in daily doses of 0.15 mg. and increased to 0.3 mg. if the response was unsatisfactory. Fifteen of the 25 patients became entirely free from acne after two to six months of treatment, 2 whose treatment was intermittent became free in eight and nine months and the remaining 8 are still under treatment; all show improvement. All the female patients (but 1 with hirustism) have shown a synchronous improvement, comparable to the response of the acne, in menstrual difficulties. The biologic and recent experimental evidence and the results of adequate estrogen therapy suggest that acne is caused by a disturbance of the normal functional balance between androgens and estrogens when the preponderance of the androgenic factor becomes sufficient to exert its specific acnegenic effect in a given individual. *J. Clin. Endocrin. vol. 2, p. 636.*

SCABIES REMEDY

Percival used tetraethylthiuram monosulfide for treating 50 patients with scabies. It was non-irritant when applied as a pure powder and cutaneous idiosyncrasy was not encountered. It was curative in a 5 per cent. liquid preparation; 25 per cent. tetraethylthiuram monosulfide, 10 per cent. of polyglycerol ricinoleate and 65 per cent. of industrial methylated spirit. One part of this oil was added to four parts of water immediately before use. The 25 per cent. concentration remained stable at room temperature but crystallized at a lower temperature. Gentle heating redissolved the crystals. The diluted oil separates and thus the required 5 per cent. dilution should be prepared just before use. For cure the preparation was rubbed over the whole body, with the exception of the head, face and neck, twice a day for three days. *Brit. ed. J. 1942, vol. 2, p. 451.*

DISTEMPER VACCINE

Dog owners can now have their pets protected against distemper by a new vaccine, adding another form of treatment to the immunization methods used against this widespread disease. The vaccine is prepared by passing live distemper virus through 50 to 60 ferrets by a method developed by Dr. R. G. Green, University of Minnesota bacteriologist. This deprives the virus of its disease-causing power. But a single injection is claimed to give a dog lifetime protection against distemper.

Animals eight to ten weeks old can be given early immunity by only one injection of the new vaccine, compared to three or four injections required in previous methods of distemper control, according to Dr. Charles E. Fanslau, director of the veterinary division of Winthrop Chemical Company, distributors of the product for Fromm Laboratories.

Two other methods of immunizing dogs have been used successfully in recent years.

In one method, vaccine injections are followed by injections of living virus. Dogs, instead of ferrets, are used to produce the vaccine in this procedure, and manufacturers are finding it difficult under present conditions to obtain enough animals.

The other method combines the administration of anti-canine-distemper serum with living virus. Whichever method is used, authorities warn that immunization must be undertaken only by a veterinarian. *Science News Letter, January 23, 1943.*

DOMESTIC BELLADONNA

Fields of belladonna, the drug called deadly night-shade, have been harvested by American farmers for the first time to replace former imports from central Europe.

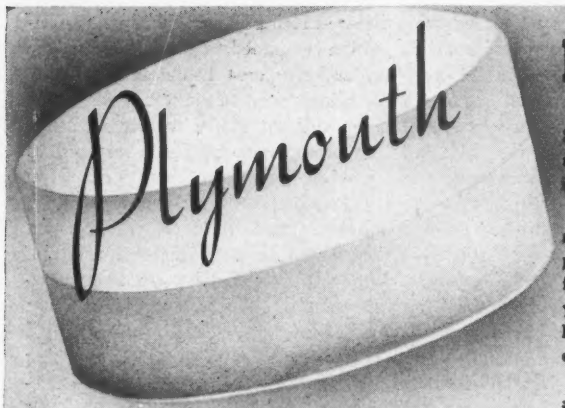
Yields are good and quality is satisfactory, the U. S. Department of Agriculture reports, the average content of active constituents being almost twice the U. S. Pharmacopoeia standard.

Although some of the drug has been grown in this country for many years, the main source has been central Europe. But in 1940 the Bureau of Plant Industry anticipated a shortage, planted the drug for seed and has since bought seed from other sources.

This was distributed last spring to growers and between 400 and 500 acres were harvested this fall in Wisconsin, Pennsylvania, Virginia, Tennessee, Ohio and other States.

Supplies are adequate at present to meet military and civilian needs, the Agricultural Research Administration of the Department of Agriculture estimates.

Only a small acreage is needed to supply the nation, and growing drug plants is a highly specialized business, drug specialists of the Bureau of Plant Industry warn. *Science News Letter, January 9, 1943.*



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Since the introduction of this new face powder material sales of it have constantly increased because the use of it actually represents a development in fine face powders.

Its exceptional silky, soft, smoothness, the complete absence of odor and the extremely fine particle size of it, plus its extraordinary adhesiveness actually improves a face powder in which it is used. As little as 5% added to your formula will bring about this result although it is being used in some face powder to the extent of 15% and a formula is offered showing its use in this percentage.

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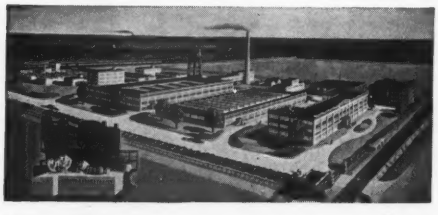

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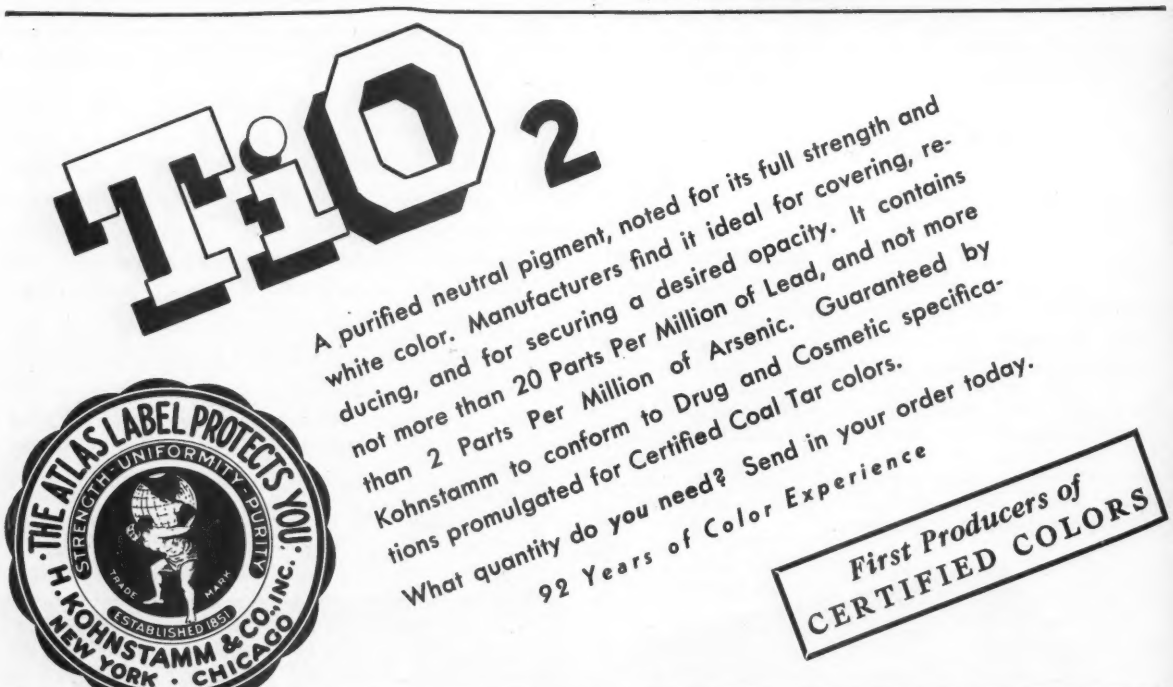
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READERS' QUESTIONS

PRESERVATIVE: In a recent issue we notice that you recommend a preservative for use in a lotion. We are interested in knowing if this would be a good addition to lotions and vanishing creams. We understand that formalin is an excellent preservative but we are under the impression that its use is not permitted in some States. The trouble we have usually found with ordinary preservatives is that when used in a brushless shaving cream they seem to sting the skin. Louisville.

Formalin, although a very powerful preservative, is by no means suitable for use in cosmetics. It has a strong odor which is difficult to mask, it is volatile, so that it may be gradually lost from the product, and it is often irritating to sensitive skins. Many others of the commonly recommended preservatives should not be used in cosmetics because they have too strong an odor or may be irritating. For a long time we have been recommending the use of methyl para-hydroxybenzoate as a general preservative for cosmetic use. It is colorless, odorless, tasteless, non-irritating, soluble in oils, and effective in very small, concentrations. If you will use from 0.1 to 0.2 per cent. of this product in your creams and lotions, you will be reasonably certain of protection against bacterial action.

FOOT POWDER: We read with interest your article "Foot Powders" appearing in the November issue of "Drug & Cosmetic Industry." You state that if aluminum sulfate is used, it must be buffered to keep it within the proper pH limits to prevent deterioration of fabrics. We assume that you suggest the use of sodium sulfocarbolate for this purpose and note that 3 parts are used to 8 parts of aluminum sulfate on a basis of 100 total parts for the finished powder. Chemical reaction between these two substances indicates that 16.7 parts of sodium sulfocarbolate would be required to completely neutralize the sulfuric acid formed by hydrolysis of the 8 parts of aluminum sulfate. Questions: 1. Is it desirable to use sufficient sodium sulfocarbolate to completely neutralize the sulfuric acid formed; or, is the amount suggested by you enough to buffer the powder and thereby prevent any injurious results? 2. What is the proper pH for a foot powder in which the above ingredients are used? Salt Lake City.

We believe the pH of a foot powder should be between the limits of five to eight, that is, from mildly acid to slightly alkaline. Actually, there should be little difference in the value of a powder as long as it is not too far from being neutral, only strongly acid or alkaline reactions having a real effect on the skin. As you state, the sulfocarbolate included in the formula is not sufficient to neutralize all of the aluminum sulfate. This would be unnecessary since the aluminum sulfate itself, even if dissolved in water, would not completely hydrolyze. Only enough of the sulfocarbolate need be added to keep the acidity within proper limits. Urea is used in deodorant creams to produce the same effect. The buffering of foot powders, it seems to us, is less important than the buffering of deodorants.

PERMANENT WAVE SOLUTION: Due to ammonia carbonate and bicarbonate having been restricted by the government for use in manufacturing permanent waving solutions, I would appreciate hearing from you as to how we can use ammonia water to take their place in our permanent wave solutions. We have a number of very successful formulas which contain sodium sulfite, ammonium carbonate and sodium borate and I would like to know how I could use the ammonia water to take the place of ammonium carbonate. Des Moines.

Of the many requests we have had for substitution in permanent wave formulas, this is the first one we have encountered asking for replacement of ammonium carbonate by ammonium water. Usually the ammonia is unobtainable. As a matter of fact, before you try to work out any substitutions you had better make sure that you can really obtain the quantities of ammonium water you need. The following relationship is chemically correct for making a transformation of ammonia water to ammonium carbonate. For every 114 parts of ammonium carbonate and 380 parts of borax you now use, you can use instead 100 parts of ammonia water (containing 30% of ammonia gas) mixed with 106 parts of sodium carbonate and 250 parts of boric acid. These proportions must not be changed. The final permanent wave solution made up along these lines must be tested to see that its pH is the same as the original formula. A simpler chemical way, but more difficult practical method of arriving at the same answer, is to pass carbon dioxide gas into a solution of ammonia until proper pH value is obtained. These methods of approaching your problem are not simple, but are the only feasible methods that we can think of.

LOTION FORMULAS: As subscribers to your monthly publication, we are wondering if you could give us some good formulations on the following: (a) An after shaving lotion; one that can be compounded with isopropyl alcohol, where 2 oz. can

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be retailed for 10c and 6 oz. for 25c. (b) A good overnight hand lotion; one that will heal severe cases of chapped hands. We now have a balm hand lotion, which is ideal as a skin softener and powder base, but for women in defense plants, we believe a good overnight skin lotion will have a big demand in the near future. We would like to retail a combination of an overnight lotion and our present balm lotion, the 2-2 oz. bottles at 25c. (c) A cold cream; one that can be sold at retail at 25c for a 1 lb. jar. Pittsburgh.

A low priced after-shave lotion is easily formulated from 10 parts of alcohol, 89.8 parts of water and 0.2 parts of aluminum sulfate or alum. Isopropyl alcohol may be used in place of ethyl alcohol. Costs will depend in this, as in other products, on the cost of containers and perfume that you use. It may be difficult to transform the odor of isopropyl alcohol into the pleasant mixture required. Your present balm hand lotion can be made into an overnight lotion for the purpose you have in mind by the addition, during manufacture, of from 2 to 5 per cent. of peanut oil. This additional oil should have a substantial skin softening effect. A relatively inexpensive cleansing cream can be made according to the following formula:

Stearic acid	5.0
Triethanolamine	2.0
Mineral oil	35.0
Water	58.0

Melt the stearic acid and mineral oil together; dissolve the triethanolamine in the water and heat the solution to 60°C. Mix the two and stir until completely emulsified. Consistency can be adjusted by increasing or decreasing the proportion of water.

PINE OIL: Possibly you can give me some assistance in the manufacture of my pine bath liquid, consisting of gum tragacanth, glycerin, Siberian pine needle oil and water. The product after standing from one day to two weeks begins to separate either into two layers or into curds. We would like to make a stable homogeneous solution and would appreciate your assistance in doing this. In addition, the green color that we use in the mixture fades completely on exposure to light and we would like to know how to obtain a faster green shade. Albuquerque.

Your pine bath is different from any we have ever seen and there is no reason at all why it should stay together. A pure Siberian pine needle oil is not soluble in water and not very well emulsified by your procedure, so that any homogeneous solution you first get is wholly accidental. Your solution contains about 8 per cent. of the pine oil. The oil either can be dissolved in sulfonated castor oil which is then diluted with water to make the finished pine bath liquid, or enough alcohol may be mixed into your present formula to keep the pine oil in solution. At the same time, however, too much alcohol must be avoided to prevent precipitation of the tragacanth. For a sulfonated oil formula mix eight parts of pine needle oil with 50 parts sulfonated castor oil and then add 42 parts of water, with or without the addition of one-half part of gum tragacanth. Or another alternative, omit section two of your formula and dissolve your pine needle oil in section three in 20 parts of diethylene glycol ethyl ether, adding 80 parts of water to section four. As regards the fading of your dye in the light your supplier should be able to give you a dye which is faster to light than the one you now use. Some dyes, because of their brilliance, are extensively used in products that do not have to be exposed to light and their lack of light fastness is no disadvantage.

PEARLY HAND LOTION: We are working on a hand lotion formula and would greatly appreciate knowing what chemicals are used to produce pearliness in lotions of this type. Georgetown.

It is not so much the presence of chemicals that produces pearliness in creams, as the absence of others. In other words, a lotion based on stearic acid, and containing a gum will in time develop very distinct pearliness of the type you desire. The presence of definite quantities of mineral and vegetable oils, waxes, fats, etc. will completely prevent the development of pearliness, which is due to secondary crystallization of the stearic acid. Therefore you must decide for yourself whether or not you want pearliness, which will require the preparation of a very simple product or a more complex mixture, probably more beneficial the skin, but without pearliness.

ROSIN DEPILATORY: We have been having trouble with a depilatory of the rosin type. A formula on this preparation that works, would be appreciated, as well as a lubricant to release molded cakes of this product from the pans. Chicago.

You do not mention specifically the type of trouble you are having with your rosin depilatory so it is difficult to give you detailed information. The following formulas from Chilson's Modern Cosmetics" are worth trying.

Rosin	52.0	42.0
Yellow beeswax	25.0	37.0
Carnauba wax	....	6.0
Paraffin	17.0	....
Petrolatum	5.0	....
Mineral oil	....	14.0
Perfume	1.0	1.0

Probably the best type of lubricant is either glycerin or mineral oil depending on the formula you use.

COD LIVER OIL OINTMENT: I would greatly appreciate your sending me a formula for an ointment containing 70% cod liver oil. This ointment should, if possible, resemble a cold cream in color and texture. Brooklyn.

It is difficult to formulate a cream containing this amount of oil along with water since the product is likely to be unstable. In addition, cod liver oil preparations containing water will probably become rancid more quickly than those without water. For this reason we believe you would do well to make a mixture containing 70% cod liver oil, along with enough petrolatum and beeswax to give the proper consistency. To whiten the product one or two per cent. of titanium dioxide may be ground into the ointment. About one-tenth of one per cent. of hydroquinone should be dissolved in the cod liver oil to assist in preventing oxidation.

HAIR PREPARATIONS: I am interested in obtaining formulas for tinctures of jaborandi, capsicum and mullein. Milwaukee.

Tincture of capsicum can be made by macerating powdered capsicum with four volumes of alcohol and one volume of water and then submitting the whole to percolation. This is the only tincture of the three you are interested in that is mentioned in official pharmaceutical literature, but probably jaborandi and mullein can be made in the same way.

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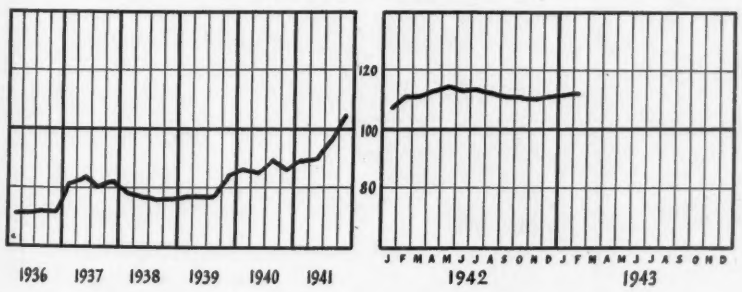
Cade oil 5c	Citronella oil Ceylon 10c	Olive oil edible 35c
	Java 50c	

Down

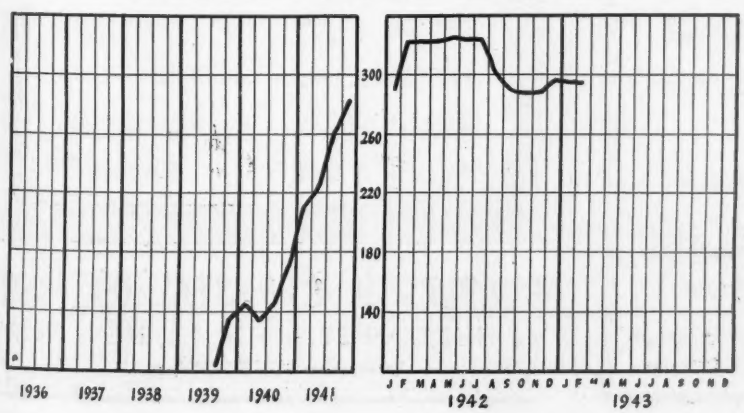
Aconite root 30c	Dandelion root 1c	Phenylacetaldehyde 10c
Apricot kernel oil 2c	Dill oil 15c	Podophyllin 85c
Benzyl cinnamate 35c	Gentian root 1c	Quince seed 5c
Caraway oil $1	Geranium oil African $2	Rhubarb root HD 5c
Clove oil 5c	Bourbon $3.50	Saffron Valencia $1
Colocynth pulp 35c	Henbane leaves 15c	Valerian root 5c

25 Cosmetic Raw Materials—Unweighted Price Index. 1926=100.



The cosmetic raw materials index advanced fractionally to 112.1 from the previous 112.0. Balsam Peru advanced 10 cents to $1.40; quince seed declined 5 cents to $1.45. Of outstanding interest were reports that spot supply of menthol was now so low that requirements would have to come from domestic peppermint oil for the duration.

15 Botanicals—Weighted Price Index. 1926=100.



The botanicals index declined to 294.9 from the previous 295.0. Gentian was one cent lower at 50 cents and rhubarb was down 5 cents to $1.15. The market was definitely quiet, the tendency of consumers being to use current inventories to cover current needs. The present policy of consumers is said likely to continue for about two months with the normal upswing in demand expected with the advent of Spring.

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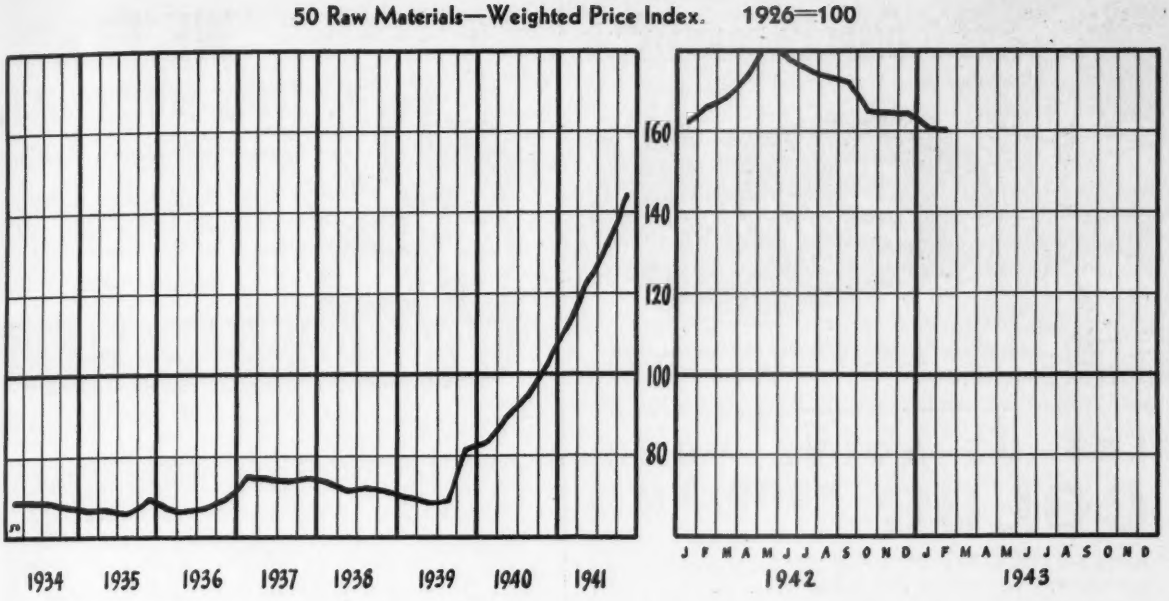

The price index of fifty commodities for January, 1943 declined fractionally to 160.0 from the previous 160.7. The fundamentals of the market were little different than they had been for some time now. Demand held well and values for the most part remained stabilized under either specific dollars and cents ceilings or by the General Maximum Price Regulation.

• Prices quoted in this section were current on the first of this month.

WAXES

Conditions changed very little in the market for waxes during the period under review. In beeswax, it is a question of getting wax in primary markets at a price which would permit profitable business to be done at the price limits set by the official ceiling. And that is going to be a tough job, according to the trade.

Permits to import beeswax have issued from Federal authority, but importers reported extreme difficulty in getting import quotations at values possible under the established limitations.

In carnauba wax, it is a matter of getting ships that will be permitted to load wax as a cargo. It is hoped that through the trade agreement reached recently between the governments of Brazil and the United States, fairly generous provisions for wax transport may be worked out.

As a matter of fact, some carnauba wax did arrive from Brazil the latter part of January, but so far as could be ascertained, it probably will move from dock to manufacturing consumer. Meanwhile, prices in Brazil continued to advance—this time by leaps and bounds. No more fractional advances—the cables come in cents higher per pound. To date the rise is between 6c and 7c per pound. In some measure the advancing market there tends to confirm earlier reports of a smaller crop and damage to the yellow grades. Replacement costs are now very close to official price ceilings.

Candelilla wax had not been offered in the primary market for quite some time but is again being offered from Mexico. A new export setup is in effect there. All offers are made by a Mexican bank to its New York office. This counteracts the previous policy whereby all offers had been made through a single commercial house, privately owned.

FISH LIVER OILS

The government was the main buyer of fish liver oils during the past month. Further activity on the part of the Food Distribution Administration was awaited. Stocks were reported in fair shape.

From San Francisco came a report that the lower grade A oil from shark livers was being purchased in a fairly good manner for use in feedstuffs, but that government is apparently the only substantial buyer of higher grades. One thousand to 15,000 unit A oil is named at 9c to 9½c per million units; 100,000 unit oil is 15c. The shark fishing is reported good.

CINCHONA

An agreement has been signed between the United States and Peru under which this government will purchase all Peru's exportable surplus of cinchona bark and derivatives, it was revealed by the Office of Inter-American Affairs. The agreement was signed several months ago but had not been announced heretofore. It is the first of a series of quinine agreements which the United States hopes to conclude with the other American republics. Notably among the other Latin American countries with which negotiations for similar agreements are going on is Bolivia.

In addition to providing for purchase by the United States of all the exportable surplus of quinine from Peru, the agreement also provides for assistance by this government in the establishment in Peru of processing plants for production of quinine and totaquinine and plantations for long-range cultivation of cinchona.

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GLYCERINE

Since the drought years of 1934-36 there has been a strong upward trend in the production of inedible tallow and greases.

Under M-71 Revised, soap makers are permitted to consume 90% of their 1940-41 average consumption of fats in products produced currently for civilian and military use.

Control over glycerine, essential in the manufacture of explosives and numerous other military products, was tightened to limit deliveries without specific authorization to 1,150 pounds per month by a War Production Board order issued December 10. This order amends a previous one exempting from direct WPB allocation control any shipment of 10,000 pounds or less by a producer. Deliveries of between 50 to 1,150 pounds per month may be made, without special authorization, to base-period (1940) deliveries when used by hospital, clinic, laboratory, or similar institutions, or by pharmacists in compounding prescriptions, or for the manufacture of other medicinal preparations. All other uses of glycerine permitted under this 1,150 pound exception, and for which specific authorization to accept delivery is not required, are limited to 70% of the amount used in the base period.

Producers and distributors are allocated monthly specified percentages of the quantity of glycerine which may be delivered on order by consumers of over 1,150 pounds per month. The quantities delivered depend on the preference rating applicable to the glycerine ordered and the end uses to which it is put. Permitted deliveries to the less essential industries were considerably lower in December than in November.

MENTHOL

A portion of the current demand for menthol is being satisfied as some houses are reported to be selling 25 and 50 pound lots to consumers. But it is said that the actual number of case lots on spot could be counted on the fingers of both hands.

The situation as far as synthetic menthol is concerned is also serious. It is stated that demand is not being met as far as general consumers are concerned, although this is attributed in part to the fact that considerable quantities of synthetic menthol are going into government channels.

It is almost certain that from now on requirements of menthol will be dependent entirely on production from domestic peppermint oil. This will necessitate a sharp increase in production of peppermint in this country this year. The availability of farm labor for such production will certainly be a factor in the prospects for such an increase, as will the fact that the concensus of opinion in the trade here regards price ceilings under the GMPR as entirely too low.

PODOPHYLLIN

Podophyllin, active principal of mandrake root, which enjoys a wide demand in the pharmaceutical industry, has been sharply reduced in price as the result of lower raw material costs. The article, subject to rather wide fluctuations over a period of years, goes into the manufacture of laxative pills.

New quotations as announced by manufacturers are as follows: 100 pounds or more, $7.65; 50 pound lots, $7.75; 25 pounds, $7.85 per pound.

ALCOHOL

Demands for industrial alcohol, including that needed in the production of synthetic rubber, by the end of 1944 will be in the neighborhood of 590,000,000 to 640,000,000 gallons annually, Walter C. Whitman, assistant chief of the Chemicals Division of the War Production Board, told a subcommittee of the senate committee on agriculture January 5.

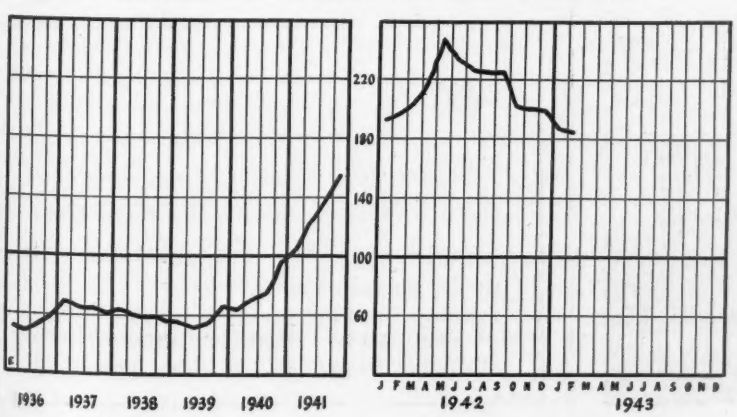
Testifying at the resumption of the committee's investigation of the synthetic rubber program, Mr. Whitman assured the committee, however, that the demand will be made under the program of increased capacity put into effect by the government. Construction of three new plants at Omaha, Neb., Kansas City, Mo., and Muscatine, Iowa, already has been authorized, he said, and others will be built in the Mid-West if needed upon completion of surveys now in progress. In addition the industries will have a 54,000,000 gallon stockpile to draw upon when needed.

Dr. Whitman said that the total 1943 needs of industrial alcohol are estimated at 510,000,000 gallons, of which 200,000,000 gallons will be used for production of rubber. The rest is for manufacture of munitions and for other military uses and anti-freeze. Synthetic rubber production next year, he said, will require twice as much grain alcohol as it did in 1942.

BISMUTH

Bismuth metal goes under complete allocation as of February 1. War needs arising from scarcity of other metals will get first call on stocks. There is nothing in the allocation order which specifies the position of the bismuth salts.

15 Essential Oils—Weighted Price Index. 1926=100.



The essential oil index declined to 184.4 from the previous 186.8. Clove oil was off 5 cents to $1.65; geranium dropped sharply to $14. Citronella oil advanced, however, to a new basis of $1.25 per pound. Most interest in the trade centered in the tentative price schedules prepared by the OPA to govern sales of coumarin, ethyl vanillin, and vanillin.

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CAMPHOR

Quotations on synthetic camphor were advanced 1½c per pound during the current trading period. This was the first change since August, at which time quotations were reduced 2½c a pound. Despite the advance, the new quotations are a full cent per pound below the March ceiling.

Demand for synthetic camphor is continuing at a high rate with the single ounce tablets continuing to be the most active because of the shortage in the half-ounce sizes.

On the basis of the new schedule powdered camphor in 1,000 pound lots will be offered at 68c per pound. The new price on tablets in 2,000 pound lots is 81c per pound.

CASTOR OIL

CCC is the buyer and its price to Brazilian sellers remains at $75 per long ton f.o.b. Brazilian ports. The market is active and producers can use all the beans provided for them.

From the Mid-West reports indicate that the call for castor oil is good and the price structure firm. Buyers are said to be willing to take additional quantities but offerings are not large. Prices are:—cold pressed, U.S.P., 14½c per pound, returnable drums, car lots; 15¼c, drums, less than car lots; 12¾c, tanks; No. 3, extracted, 12½c per pound, drums, car lots; 15c, drums, less than car lots; 13½c, tanks.

TOTAQUINE

The market price of totaquine was reduced during the current trading period and is now offered at 35c per oz. in 100 oz. cans and 38c per oz. in 25 oz. cartons. The smaller quantity packages have been discontinued.

The medicinal chemicals index remained without change, the index figure continuing at 125.1. The War Production Board made a contribution to developments through its order M-221, which is designed to standardize the size of bags permitted for use by processors and packagers of chemicals. Standard packages over the range 2 to 100 pounds were provided. Only specified-sized bags may be used after April 1.

OLIVE OIL

Despite strong and persistent trade rumor that new ceilings of $4.50 to $4.75 for California olive oil, with a 50c duty markup for imported oil will be placed, latest inquiry to OPA netted a negative answer, although the matter is reportedly under consideration.

Only a few odd lots of heavy type imported oil were reported in the spot market during late trading, with domestic oil also in small supply. Although reports from the West Coast indicate that the new California crop is about ready to be marketed, very few drums have as yet arrived in the New York area. The principal difficulty lies in obtaining drums, and offers to ship the oil in tank cars have met with little favor. Shipments of domestic oil are expected to reach a good volume within three or four weeks, provided the container situation can be overcome.

Trade reports indicate that the Government will assure $3.75 per gallon to processors paying growers a minimum of $127 a ton for olives. However, contracts for future delivery have reportedly been made at as low as $3.40 a gallon.

Prices for imported oil, duty paid, ranged from $4.75 to $5., while California oil in drums brought $4.25 to $4.35.

Olive growers in Palestine must obtain permission to pick or press their 1942-43 olive crop. The announced object of this measure is to avoid the picking of unripe olives which would result in poor yields of olive oil. An additional reason is understood to be the desire of the Government to prevent hoarding, profiteering, and shipments of oil out of Palestine where it is badly needed.

RIBOFLAVIN

Producers of riboflavin announced a reduction of 6½c per gram in the price of this item and now quote: 100 gram bottles 58½c; 25 gram bottles 61½c; 1 gram bottles 68½c per gram.

AGAR

From seaweed beds off the Southern California coast, which in prewar days were known only to Japanese "seaweed farmers," four new species rich in agar have been found. The discovery, announced by University of California scientists, was made at a time when Japan has a 90 per cent. monopoly on agar.

Robert H. Tschudy and Marston C. Sargent reported the discovery in the magazine Science, saying that all four of the species of seaweed under study "readily yielded agar, in quantity and quality equal to that obtained from (other species) at present commercially exploited."

Japanese divers, working in secrecy, formerly harvested tons of seaweed off the coast "south of Los Angeles," dried the product and shipped it to Japan for refining.

ESSENTIAL OILS

Brazil has become particularly interesting to the essential oil industry during the last year. It is now exporting to the United States oil of orange, and also large quantities of safrole-bearing oils, such as natural sassafras, with a safrole content of 80%.

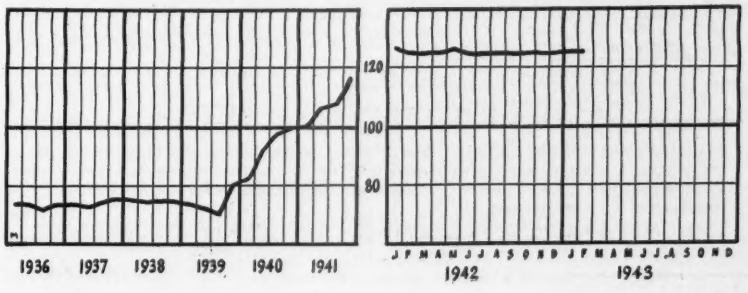
Oil of petitgrain from Paraguay experienced a rather sharp drop; that is, by approximately 35c per pound, which brings the price of this commodity practically within the peacetime range.

Vetivert Java, which had risen from a low of about $2 a pound, to a high of close to $50, has now settled at an official price of about $30 a pound.

In sympathy with the decline in price of the French lavender oil, spike lavender has experienced a drop in price.

The clove situation is gradually becoming rather precarious. Some government agency has prevented the allocation of shipping space for cloves from the origin to the United States, and has thus succeeded in working up a monopoly for the speculative holders of cloves in this country.

15 Medicinal Chemicals—Weighted Price Index 1926=100



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